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THE 1943 TREATY

THE POSITION OF CHINA AND THE TREATY POWERS IN THE MATTER OF THE "OBLIGATIONS" OF THE FORMER SHANGHAI MUNICIPAL COUNCIL

When Britain and the United States agreed, so far as they were legally able to do, to transfer to China all their rights in the International Settlements at Shanghai and Amoy and in the Concessions at Tientsin and Canton (Shameen) the National Government of the Chinese Republic solemnly covenanted to make provision for the assumption and discharge of the official obligations and liabilities and for the recognition and protection of the legitimate rights of the administrative areas which she took over.

It is now more than two years after the end of the war and the complete transfer of the Settlements and Concessions and these solemn covenants have not been fulfilled. The honour of China, of Britain and of the United States are involved, the sanctity of treaties is in question, and the fate has for two years been and continues to be imperilled of all whose careers and livelihood or pensions were sacrificed, and whose money was invested in the well being of the Settlements and secured by the assets which were transferred over their heads to the Republic of China.

In this Review of January 29th, this year, a full statement was made of the financial liabilities of the former Shanghai Municipal Council according to its own published and audited Balance Sheet and Report. The municipal loans including a sterling loan of £427,000 in 1939 were set out in detail. The obligations to the Council's former civil service, most of the foreign members of which have lost their

employment were fully investigated with expert help from the former Treasurer and other officials in 1946. In the same year the Chinese Government appointed a "Commission for the Liquidation of the Official Assets, Obligations and Liabilities" in the different settlements and concessions which was according to the Regulations to complete its work and report to the Executive Yuan within one year. In Shanghai a Commission was set up under the Mayor Mr. K. C. Wu as Chairman together with a Secretary and at least eight Chinese members together with a few foreign advisers. The claims have been under investigation by sub-committees for a whole year, but it is understood that numerous reports have been submitted by the Commission's Committee on Staff Benefits to the Commission and submitted by the latter to Nanking but for many months there has been no meeting of the full Commission. In the meantime the former employees of the Council, a great number of whose foreign staff was interned during the war, are left to their fate without (except for the aid given by the British Government) their pensions superannuation funds and other dues under their employment contracts, and the investors in the Municipal debentures which once were regarded as trustee securities are bereft of their capital and of the interest on which many depended for maintenance in old age. The number of claimants is gradually decreasing by death but the fate of the staff which once served the "Model Settlement" is now forlorn and

a sad comment on public international morality.

It would be some consolation if China admitted the debts and asked the other Treaty Powers concerned to meet the obligations under a guarantee of reimbursement. The sum involved however is not large and surely within the capacity of China to pay. About £3,000,000 sterling would suffice to pay the amounts due to the staff in respect of their superannuation funds and to retire them on fair terms while a diminishing annual payment of £100,000 would meet the pension obligations.

The position of the Treaty Powers concerned is also a matter of great importance from a moral and legal point of view. Britain has so far recognized its position whether or not it has publicly recognized any obligation and has been giving substantial assistance in the matter of pensions and grants to British subjects.

When America and Britain agreed to transfer the assets of the former International Settlement to China, they could only agree to do so for their own part and to cooperate with China in persuading the other interested governments to rescind their mutually binding contract whereby they merged their authority in the corporate Shanghai Municipal Council in 1854. Thereafter the Council acquired and developed in the course of ninety years corporate assets of a tremendous value on which all its obligations were secured. When these assets were at one fell swoop transferred to China by Powers that could not even pretend to own the property or have any control over it in law, those Powers became morally and legally responsible for the protection of the rights of those who suffered by what in the case of individuals might be regarded as a wrongful act, and they should either have secured the due ful-

PROBLEMS OF RECONSTRUCTION IN KWANGTUNG

The new regime in Kwangtung which dates from Dr. T. V. Soong's assumption of power on October 3 is confronted with the same tasks which the former regime (of Generals Lo Cho-ying and Chang Fa-kwei) found beyond its ability to solve. Dr. Soong as Governor of the Province and Director of the Generalissimo's Military headquarters in Canton is now in full military and civil control of Kwangtung. Confidence in his regime by influential banking and commercial circles is assured and Mr. Soong further commands much support among foreigners.

There are six major problems which require immediate tackling: (1) Flood rehabilitation, (2) Restoration of communications, (3) Elimination of graft

filment by China of its obligations or themselves as sureties or principals honoured these debts subject to their reimbursement from China on the basis of the Treaty.

Under the constitution of the former Council—the Land Regulations—the Council could be sued in a specially constituted Court—the Court of Consuls. By the Treaty of 1943, however, the Powers concerned not only took away the assets which secured the obligations of the Council but deprived the claimants of the only legal remedy they possessed. All that is left to the claimants now is to pray for the interposition of their respective governments to secure the observance of the Treaty on the part of China or to recognize their own obligations at least to their respective citizens.

The development of international law has extended the principles of justice between individuals to justice between states. U.N.O. and the International Court at The Hague deal with disputes between states. The world has not yet advanced to the protection of individual citizens against the acts of sovereign states which by treaties between themselves are free to dispose of the rights of their subjects. The subjects have no remedy in law, but whilst the parties to the Treaty may be unable amongst themselves to secure the enforcement of its terms, the subjects whose rights and property have been taken away without any say on their part are surely entitled not only to the protection of their own states but to the performance of obligations under the dictates of humanity—and of international morality.

and official corruption, (4) Observation of laws and Government regulations, (5) Combating of anti-civil war and separatist movement, and (6) Curbing of the Communists.

All rehabilitation and development work is conditioned on the enforcement of law and order in the Province and the introduction of a better civil service than is operated at present. The all-important issue in Canton as elsewhere in China is the Communist expansion of influence among the population at large and the extension of their military and guerrilla activities. Unless Dr. Soong can succeed in what is so euphemistically called, pacifying all or at least the principal districts of his Province no success will attend to his plans for economic rehabilitation of Kwangtung.

From all accounts and personal witness one gathers that the Communist movement is gaining more strength and finds much active support among the country people and the very numerous city proletariat. Considerable successes by guerrillas have been scored during 1947 and all pacification campaigns, mopping up operations and police measures proved in the end futile.

Reports of increasing guerrilla fighting in dozens of localities in the Province have become routine by now and it is no longer possible to speak of Kwangtung being fully under the control of the Government at Nanking. Some districts of the Province are partly under complete control of Communist-led people's regional governments, especially so in the south west and on Hainan Island. Reviewing the past 10 months there is no doubt that the position of the Kuomintang has been weakened and popular support for the Nanking regime is on the decrease. In an emergency situation Nanking or Canton could not count on sincere popular cooperation.

Although not allied but sympathising with the cause of the Chinese Communists are various factions whose opposition to the Kuomintang has grown very emphatic, principal among which are the Democratic League, the majority of Democratic Socialists and minor parties either still permitted to function or already outlawed. Acting according to the maxim "*E duobus malis minus eligendum*" the liberal and democratic groups in China are, to an overwhelming degree, backing, if backing there must be, the Communist leadership in their attempt to overthrow the present government in Nanking.

Under such conditions the efforts by Dr. Soong and his close and very able followers, many of whom are recognised for their high measure of integrity, may easily founder. While it may have been well understood among *les nouveaux*

messieurs in Canton that the situation in Kwangtung is inseparably linked to the fate of the Chinese nation and that no provincial solution is possible which is not in accordance with the developments in the rest of the country, some progressive work could be started forthwith such as: the reduction of banditry along the main lines of communications, rehabilitation of certain highways and railroads, dropping of the most inefficient and blatantly corrupt officials, obtaining some relief for the distressed people in the areas destroyed by the summer floods, introducing more equitable conditions for provincial and national trade and thus curbing the various forms and methods of smuggling.

Trade in South China has been, relative to the deterioration in other parts of China, rather prosperous which fact is due to the virtual non-observance by the trading and consuming population of the host of Chinese trade restrictions, embargoes and exchange regulations. It is traditional in China that legislation which is regarded as interfering with trade—the national occupation *par excellence*—has been silently and effectively opposed.

Merchants and manufacturers found ready and greedy helpers among the bureaucracy and an officialdom which is kept officially half-starved but, on the sly, does usually so well that a satisfactory existence can be built upon the spoils of office before it must be handed over to the lucky successor. Smuggling in China is an organised and often a highly sponsored affair; the very low level of morality in China, a source of continual admonitions and lamentations by the Generalissimo, emphasised over and over again in his "China's Destiny", and the penury of civil officials and the military, have enabled China's trade and industry to survive the present period of a severe economic crisis.

Trading in contravention of Nanking's laws and regulations can only be reduced in extent if they are altered so as to allow sufficient supplies for the markets and factories of China and to guarantee an adequate return for the exports from China. Dr. Soong has been reported hard at work convincing the Generalissimo of the impracticable trade and exchange policy of Nanking; however, the way to the ear of his brother-in-law is blocked by the intransigent ultra-nationalists.

The overseas Chinese play a great role in the scheme of Kwangtung's future development as planned by Dr. Soong. Indeed, the financial resources of these Chinese emigrants or citizens in foreign countries of Chinese ancestry are huge and parts of these funds or investments abroad could be utilised for the development of Kwangtung, the province from which the majority of overseas Chinese originated. The international angle may be left out for the moment as it involves issues of far-reaching importance; the loyalty to the new country of immigrants from China

and their sincerity as regards assimilation has been long doubted in all Far Eastern countries and even in the U.S. there is much uneasiness about the implications which are revealed by the uninterrupted remittances of funds earned in the U.S. by Chinese immigrants or U.S. citizens of Chinese stock.

The overseas Chinese have been often persuaded to return to their native country or at least to send their savings back to Kwangtung in order to assist in the rehabilitation of China. While most well-to-do Chinese abroad are quite clear about the unbusinessmanlike appeals emanating mainly from Canton, they are quite willing to invest, with good care taken, in some enterprises even if the security and returns are not what normally could be expected. However, the current position in China generally and, to a lesser but sufficiently serious extent in Kwangtung cannot but deter foreign capital, be it of Chinese or other nationality, from investment propositions in a country where civil war either is progressing, with the greatest fury or carried on underground and in the tradition of the celebrated Spanish guerillas of Napoleonic days.

Another plan by the new Government in Canton is to obtain large loans from the government banks in order to finance various projects. The construction of a deep sea harbour at Whanwoa would also be attempted in this way. In view of the monetary inflation in China no state bank loans can buy the necessary supplies and equipment for constructing dams in the flood-exposed areas, build new highways and railroads, import locomotives and motor trucks, repair the destroyed factories in Kwangtung, not to speak of the construction of a great harbour. The Chinese currency has first to be stabilised which again is possible only if the great fight ceases.

Some portions of a future American loan, i.e. gratis supplies of industrial goods and raw materials, may eventually be diverted to Kwangtung and help to rehabilitate the economy to some extent. This is the only light spot in an otherwise dark picture. However, the much talked about loan has not yet materialised and it is anticipated that it will largely consist of supplies of materials and equipment useful only to the fighting forces.

Relief for Kwangtung has been generous in the past and there will be much help coming still from old UNRRA stores, post-UNRRA grant by the U.S., overseas Chinese assistance to their families and friends, districts and townships. Only recently, upon winding up its business in Canton, UNRRA handed over to the Kwangtung Government what was left: trucks, bulldozers, road and rail construction materials, etc.

A community, however, cannot and shall not live on charity; there is too much talk about relief and assistance which cannot but undermine the self-confidence of the Chinese, harm their character spirit and courage.

E. J.

SURVEY OF CHINA'S MINERAL RESOURCES

By JAMES A. RABBITT

(Second Part)

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(IV.) IRON ORE

(a) Reserves

Much the same error in evaluating China's wealth in iron, as in the case of coal, has been due to its widespread prevalence throughout the land.

The all important economic factors including richness and localized quantities of ore in proximity to an abundant supply of coking coal, limestone, and ferro-alloys, power, skilled labor, and a well developed system of transport to assemble all of these materials within commercial limits of cost and carry the products to nearby industrial centers for fabrication, have been woefully lacking on the Chinese scene.

Bain covered the economic aspect of quantity in relation to production by saying:

"Since modern blast furnaces are built to produce 300 to 1,000 tons of pig iron per day and often even exceed these amounts, and since it is rarely advisable to build and operate a single blast furnace but instead furnaces are erected in groups, it is also evident that only deposits capable of yielding suitable ore in millions of tons can be taken into account under modern conditions. It may well require 10,000,000 tons or more of ore to supply one furnace for a period sufficient to amortize the cost of plant and make the business profitable."

The total iron ore reserves in deposits based on recent estimates from various sources selected by the writer, as either most reliable or made up of most particulars regarding the iron content of the ores, are 1,954,149,000 tons. This total figure includes the iron ore reserves in Manchuria of 1,350,870 m.t.

The problem of classifying the iron reserves as to quality is somewhat involved as the most reliable published data on the nature of the ores was given by Tegengren's report in which document the total ore reserves of China were estimated at only 950 million tons, or approximately one-half of the present estimate.

(Total reserves of China Proper 603,279,000 tons; total production of Ore 1,516,950 tons.)

Iron Ore Production By Principal Mines in China Proper

	(in thousand tons)	1934	1935	1936
Yufan Co., Anhwei	142.3	168.2	140.1	
Paohsing Co., An-hwei	.....	130.1	195.5	181.0
Fulinmin Co., An-hwei	.....	128.3	217.1	237.2
Yihua Co., Anhwei	26.6	51.0	40.2	
Han yeping Co., Hu-peh	.....	465.7	536.7	541.7
Hsiangpishan, Hu-peh	.....	39.8	196.3	200.0
Total Production	932.8	1,364.9	1,340.2	
Total Exports (to Japan)	.....	857.6	1,316.1	1,302.7

(b) Types of Ore

The iron ores of China are of three main types or four types if the sedimentary ores of Shansi are included.

(1) Archean of Southern Manchuria and Northern Hupeh, described as probably of sedimentary origin, mostly of low iron content, of about 30 percent and high silica of over 50 percent. Some high grade beds are found occasionally mixed with these low grade ores.

(2) Sinian (Hsuan Lung types) Pre-Cambrian bedded hematite ores found in Northwestern Hopei of high grade with an average iron content of 48.56 percent. Phosphorous content 0.12 percent and practically free from sulphur.

(3) Contact-Metamorphic type—hematite and magnetite ores of Post-Carboniferous age. Occurrences of this type are widely distributed in Eastern and Central China, as far North as Manchuria and as far South as Canton. This ore is high grade with an average iron content of 60 percent, varying in phosphorous and a not objectionable sulphur content.

(4) The sedimentary ores of Shansi, as well as other widespread nodular deposits of Paleozoic and Mesozoic

strata distributed over wide regions of Northern and Western China are not classified by Tegengren nor are they included with actual resources as being of commercial value from a modern industrial point of view. They may, however, be included among the Potential resources as of minor importance.

(c) Location of Iron Ore Deposits

(1) SHANSI AND SHENSI.

Shockley described the ores of Shansi and Shensi in 1898: "The iron ores are mainly limonites and hematites, occurring in Carboniferous shales and sandstones, as nodules, usually varying from a few pounds to a few hundred pounds in weight, though masses of several tons are said to have been found. Sometimes there are several layers of these nodules, sometimes there is only a single stratum. Iron ore occurs also in beds from a few inches to a foot or so thick, and in flat veins with a maximum thickness, at present, of three feet, though tradition says there have been beds of a thickness of twenty feet found in the past. The native methods extract from 25 to 35 percent of iron from these ores."

Transportation in the district has been improved considerably since the days covered by Shockley's report and Read's first visit.

Total Reserves of the two provinces: no estimate. Production of Ore in 1934: 18,000 tons; Pig Iron 4,000 t.

(2) HOPEI AND HONAN.

The area of these two provinces which is the greatest coal producer with the largest number of modern mines, ranks highest (with the exception of later estimate made for Szechuan and Kweichow) in iron ore deposits according to the Tegengren report as well as to the Geological Survey by Wong, with the latter estimating reserves at 131,085,000 tons, closely approximating Tegengren's estimate of 124,345,000 tons for Hopei only (Honan reserves 6,740,000 t.).

The sedimentary ore which is reported as located in the Hsuan-Lung district, "situated in the Northwestern part of Chihli (Hopei) Province is among the most important in China." The importance of this remarkable series of deposits in this district which separates the Hopei Plain from the Mongolian Plateau, 135 to 170 miles northwest of Peiping, was not realized until 1914. According to Bain it was Bailey Willis, apparently, who first, recognizing the geological similarity of the formations of this horizon to those in the Lake Superior region, suggested that search for iron ore might well result favorably.

After 1914, the Geological Survey made a topographical and geological survey and sampling that proved the value of the deposits.

The reserves of contact-metamorphic ores which are referred to in general by Bain as "by far the most important", amount, in Hopei-Honan, to only 1,440,000 tons out of a grand total of 82,535,000 tons of this type ore for all China.

Tonnage Estimates of Iron Ore:—Archean 32 million; Sedimentary 91,645,000; Contact 1,440,000. Tonnage of Metallic Iron Contained: Archean 9.6 million (30%); Sedimentary 50,440,000 (55.1%); Contact 730,000 (50%).

No Ore and Pig Iron Production.

(3) SHANTUNG-KIANGSU-NORTH-EASTERN ANHWEI

The total estimated iron ore reserve of this Area is 21,777,000 tons. (Shantung 14,340,000; Kiangsu 7,437,000).

In Kiangsu there are a number of iron ore deposits all belonging to the contact-metamorphic type; none of them has been worked in modern times but considerable prospecting work has been done recently in some of these bodies.

The iron industry in this area was started by the Germans in the Chin-ling-chen district of Shantung.

According to Bain, "Chin-ling-chen is a station on the Shantung railway 175 miles west of Tsingtao. Near it, in some low hills rising out of the plain, iron ore occurs along a contact between Ordovician dolomite and dicitre. In ancient times the ore was mined and smelted by using coal, which occurs in outliers of the Carboniferous nearby. These deposits attracted attention while the railway was being built and plans were made to work them and to reduce the ore in blast furnaces to be built within the Tsingtao concession. A company, in which the Krupp interests were concerned, was formed for this purpose. The estimates of reserves then made public called for 100,000,000 tons of ore of which 49,000,000 tons was considered fairly definitely assured and 20,000,000 tons easily worked. The analysis given was: Fe: 65.00%; Mn: 0.24%; P: 0.03%; S: 0.08%.

The contact iron ore reserves of Chin-ling-chen are 13.7 million tons; Tonnage of Metallic Iron Ore Contained: 7.6 million (55.3% Fe).

No Ore and Pig Iron Production.

(4) SOUTHEASTERN ANHWEI, CHEKIANG AND FUKIEN.

The total iron ore reserve of this area is estimated at 49,440,000 tons. (S.E. Anhwei 19,864,000; Chekiang 7,154,000; Fukien 22,422,000).

In Southeastern Anhwei there are four iron ore regions, all containing ore of the contact-metamorphic type, viz.: the Tung-Kuan-Shan, Yeh-Shan, Fan-Ch'ang, and T'ai Ping districts. One of the deposits in the Fan-Ch'ang

district is already being exploited on a modern scale and the others may be worked in the near future. Actual production in S.E. Anhwei in 1936: 598,500 tons of ore.

Very little is known of the iron ore resources of Chekiang, in fact, only one single deposit, probably of contact-metamorphic type, has so far been recorded. River-bed sand iron however, is widely distributed.

In Fukien Province three different types of iron ore deposits are known: 1. ore (mostly hematite) in gneisses and other crystalline schists (Archean) of the coastal belt, extending southwards into Kwangtung. 2. ores probably of contact-metamorphic origin, mostly occurring in Mesozoic strata. 3. iron sand (magnetite and hematite) probably derived from decayed granitic rocks.

(5) KIANGSI, HUPEH AND HUNAN.

The total iron ore reserve of this area is estimated to be 77,369,000 tons. (Hupeh 39,640,000; Hunan 22,550,000; Kiangsi 15,175,000.)

Two deposits of the contact-metamorphic type are known to exist in Kiangsi both in its northernmost part near the Yangtze, viz.: the Ch'eng-Men-Shan and the Tung-Ling-Shan deposits of which the former appears to be of commercial importance. In the western part of the province, iron ore is probably, at least, partly, of metasomatic origin and is found intercalated in metamorphosed sandstone beds, distributed over a wide area comprising the Ping-Hsiang, (Ping-Kiang), Yung-Hsin, and Chi-An districts and extending westwards into the contiguous part of Hunan.

In Hupeh there are several considerable deposits, among them the Ta-Yeh ore field that has been worked for a number of years on a fairly large scale. There are also important deposits in O-Ch'eng-Hsien as well as several minor occurrences. All the iron ores belong to the group genetically connected with granodioritic rocks.

Information on the Hunan ores is limited mainly to a few brief notes by Richthofen although it is known that iron ore is comparatively extensively mined and smelted, and the production is by no means inconsiderable.

Production of Ore in 1936: 741,700 tons; Pig Iron in 1934: 17,000 tons.

(6) SZECHUAN AND KWEICHOW.

The total estimated iron ore reserve of Szechuan is 137,597,000 tons. No figures are available for Kweichow. Iron ores have been recorded in a great number of localities in Szechuan. Thin beds of carbonate iron ores containing no more than 35 to 40 percent of iron, are throughout interstratified in the Rhaetic-Lias coal measures. Haematite ores, representing

local concretions into nodules scattered irregularly throughout the parent rock, occur in Triassic red sandstones along either side of the Kweichow border. Neither class of ore appears to be suited to any large scale utilization.

The Chinese Ministry of Economic Affairs has developed new iron mines in western China, the most notable being in Szechwan, west of Luku, located near the coal fields. This ore is listed in the China Year Book, 1938, as siderite ore.

Behr stated in 1944 that "Luku is said to be the largest and most important source of ore and of.....pig iron and steel in independent China today, despite the presence of more extensive and more easily worked deposits farther north."

Iron ores are reported to be exploited at a number of localities in Kweichow but little authoritative information regarding their nature and extent is obtainable.

Some of the iron ore bodies scattered through Kweichow appear to be replacement deposits in limestone whose ores are similar to those of the replacement ore bodies of Bilbao in northern Spain. It, therefore, appears probable that the most important iron ore bodies lie away to the east of the coking coals of East Yunnan.

Actual Production of Ore in 1940 in Szechwan 122,500 tons; Pig Iron 34,000 tons.

(7) KWANGTUNG AND KWANGSI.

The total iron ore reserve in Kwangtung is estimated at 12,066,000 tons. No reserve figures for Kwangsi are available. Although it is known that iron ore is both mined and smelted by the natives of these provinces, accurate information is entirely lacking.

(8) YUNNAN.

The total iron ore reserve of Yunnan is estimated at 15,600,000.

Iron ores are undoubtedly of widespread occurrence almost throughout the province, having been noted by many explorers, but the existing information regarding their geology is extremely meagre.

Moore-Bennett states that iron ore occurs as magnetite, as hematite and as black-sand, chiefly, but that titaniferous iron ore, siderite and sulphate of iron may be noticed.

Actual production of Ore in 1940: 18,750 tons.

(9) SIKANG.

The total iron ore reserve is estimated at 66,000,000 tons with about one-fourth having an iron content of from 65 to 72 percent. Production in 1940: 17,500 t.

(10) SINKIANG, NINGSSIA, CHING-HAI AND KANSU.

No total reserve figures are available. The largest vein, 130 miles long, runs through T'a Ch'eng, and the Sinkiang iron veins were opened in 1943.

(11) SUIYUAN, CHAHAR, JEHOL.

The total iron ore reserve is estimated at 92,345,000 tons. (Charhar 91,645,000; Suiyuan 700,000).

The Lungyen Mine in Charhar has an estimated reserve of approximately 91,000,000 m.t. of ore, the highest iron content being 57.8%.

(12) MANCHURIA.

The total iron ore reserve of Heilungkiang, Kirin and Liaoning is estimated at 1,350,870,000 tons, with an iron content ranging from 30 to 68 percent. Generally speaking, the iron ores produced in Manchuria are hematite or magnetite.

A friend of the writer has confirmed the richness of iron deposits in the Tungpiantao district near the Korean border which has been described as "a vast iron zone, which extends over 50 kilometres from north to south in the district to the east of Chita-kou and Santsaokou and to the west of Talitzkou in Tunghua Province. The surveyors have estimated "that there is rich iron ore deposited in the Tungpiantao region to the amount of more than 100 million metric tons and lean iron ore of several hundred million metric tons."

Production of Ore in 1936: 1,904,537 tons; of Pig Iron 850,000 tons.

(IV. A.) IRON & STEEL INDUSTRY

(a) Historical Background

The history of the iron and steel industry of China has been ably written by Tom Read and from its antiquity, dating back to the second century B.C., one might feel justified in assuming that the Chinese should be the greatest iron masters of the World, due to their long experience.

In fact, however, while there are historical references of a state iron monopoly in 119 B.C. and an eventual production of 160,000 tons annually for the Native iron industry in Shensi by 1870, the smelting methods employed, and nature of iron deposits worked were, as has been pointed out by Bain, Shockley, Read, et al., entirely unsuited to modern industry.

The history of recent attempts to develop a modern iron and steel industry are more indicative of the psychological handicaps of the Chinese in relation to industrialization than to economic factors.

A few of the highlights of these recent attempts by the Chinese to establish a modern iron and steel industry are:

1884-1889—Viceroy of Canton purchased steel mill equipment from England, which after arrival at Canton, was reshipped to Hankow following the transfer of the Viceroy to that place.

1898—A loan was obtained from Germany and the plant was finally erected at Hangyang and put into operation in 1915, but shut down in 1922, because of a series of errors in judgment which according to Read "would require too much space to review".

This remark of Read's applies to most attempts made—many of which overlapped chronologically.

(b) Iron Ore Production

The output of iron ore in China Proper from principal mines only in Hupeh and Anhwei in 1936, amounted to 1,340,260 tons, (of which 1,302,700 tons were exported to Japan), as shown in the table of "Iron Ore Production":

By 1940, as a result of wartime development in Western China, 122,500 tons were produced in Szechwan, which, added to the above, plus 54,250 tons mined in Shansi, Yunnan and Sikang, makes a total production capacity of just over a million and a half tons. (Steel Production Capacity in thousands of tons:—Shansi 32, S.E. Anhwei 120, Hupeh 216, Hunan 240, Szechwan 108, Kweichow 120, Kwangtung 80, Yunnan 56.)

The total output of iron ore in China, excluding Manchuria, will come chiefly from two areas:

Hupeh, Hunan, Kiangsu:—50%.
Southeastern Anhwei, Chekiang, Fukien:—40%.
Szechwan, Kweichow:—8%.
Others:—2%.

(c) Iron Ore Production—Manchuria

The total over-all production is given by the Manchukuo Year Book, 1941, as follows:

Year	Lean Ore	Rich Ore	Total
	m.t.	m.t.	m.t.
1933	770,381	328,032	1,098,413
1934	739,623	393,748	1,133,371
1935	985,480	492,460	1,477,940
1936	1,325,219	579,374	1,904,592
1937	—	—	2,257,000

The production of iron ore in Manchuria during 1936, was 50% greater than in all of China Proper.

The 1937 production has been estimated from published quantity production for the first half of the year.

The Manchurian pig iron production for 1937 amounted to 850,000 m.t.

The increases in pig iron production for 1938 and 1940 as well as the projected production for 1941 are borne out by reliable information pub-

lished regarding the addition of blast furnaces at the three Manchurian companies.

Even if the increased pig iron production to 1,800,000 tons in 1940 were the limit attained, this would indicate an increase in iron ore production of more than double that which was tabulated above for 1937.

From the data published regarding the resources, it is obviously possible for the projected increased production plan to have been attained.

The Japan-Manchoukuo Year Book reports the production expansion program for the Showa Steel Works of 1,300,000 tons of rich ore and 9,090,000 tons of lean ore, making a total of 10,390,000 tons which is considerably more ore than would be required for the production of 2,800,000 tons of pig iron called for in the 1941 plan.

Steel Production: in 1937: 530,000 tons; estimated 1938: one million t.; Japanese Five Year Plan provided for 1,680,000 tons from Manchuria.

(d) Pig Iron and Steel Production

A sense of futility inhibits one in trying to describe China's steel industry. So far the Chinese have not produced the type of men who build steel industries. The import and export figures for iron and steel and export figures for iron ore reveal a woeful disregard of national economy and/or a paucity of what it takes to convert iron into steel.

Having failed to develop its steel industry when the steel producing countries were too busy to meet their own domestic demands, and expecting to start producing in the future with borrowed capital and equipment from abroad when the world capacity for steel production will be far greater than world consumption, does not inspire enthusiasm in one who has struggled with production problems in China.

Only by the sincerest emotionalism of the American people and their complete lack of knowledge of the conditions which prevail in China is it possible for us to lend money to China for starting a steel industry. Only by the technical and financial aid of friendly powers is there much hope of the Chinese maintaining the established steel industry which they may acquire in Manchuria.

Of the eight steel plants in China Proper nearly all have been confined to the production of pig iron.

(e) Manchurian Pig Iron and Steel Production

In Manchuria, three companies (Showa Steel Works, Honkeido Steel Works and Tohendo Kaihatsu) established and operated by the Japanese have produced 70% of the pig iron output and practically all of the steel for all of China.

EXCHANGE & FINANCIAL MARKETS

ALLOCATIONS OF U.S.S.

The decrease in hard currency earnings, principally U.S.\$, by Hongkong Exchange Control will shortly lead to a corresponding reduction in exchange allocations for importers as well as for travellers and for outward remittances. The public has been under the erroneous impression that U.S.\$ earnings here were sufficient to maintain the present level of allocations; however, since about the beginning of 1947 Exchange Control has only been able to supply imports of essential consumer and capital goods from the U.S., Canada and other hard currency countries, on account of its previously acquired balance.

During the initial months of trading following the end of war, and until the end of 1946, U.S.\$ earnings were considerable which was, to some extent, due to the heavy post-war influx of Chinese family remittances

About 80% of the iron ore and pig iron produced in Manchuria up to and including 1938, came from the Showa Steel Works at Anshan, a plant which was built by the Japanese in various stages up to the 4th and 5th extension programs from 1919 to 1941 with still further expansion planned. The capacity has been stepped up during each of these various stages from an original of 150,000 tons of pig iron to 700,000 tons in 1937 and 1,700,000 by 1938 with plans for an additional million tons for 1941.

Lately the development of the Honkeido Steel Works in 1935 changed the position of Anshan to some extent but nevertheless it stands as the most likely center for the future supply of iron and steel for China.

In allowing for the post-war potential we have preferred to ignore the excessive wartime planned capacity for these works in pig iron as well as steel, and therefore we assume that in the post-war period the 1938 production quantity of pig iron, 1,700,000 tons, and the 1941 actual rolling mill capacity of 1,000,000 tons of steel will be all that China can absorb from Manchuria provided that removals and destructions of plants have not been excessive.

Actually the steel ingot capacity of Manchuria was 1,800,000 tons, two-thirds at Showa and one-third at Honkeido. This information is based on good authority

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(The THIRD and CONCLUDING PART of the SURVEY OF CHINA'S MINERAL RESOURCES will be published in our next issue, No. 29, of November 26, 1947).

(which accumulated during the war years) which were then not routed through the open market as has been the case during the current year. This favourable balance, reaching at one time an estimated U.S.\$ 12 million, enabled Hongkong merchants in 1947 to import a large variety of goods from the U.S. at official rate of exchange which on the average was 25% below the unofficial quotations.

It appears that a comparatively low level has now been reached and that it would be unwise to continue spending more than is collected from the three main sources for U.S.\$ earnings: inward remittances; 10% of U.S. importers' bills (provided that local importers avail themselves of the facilities offered by banks here); surrender of 25% of local exporters' bills of certain specified commodities (mainly tung oil). These three sources have produced steadily decreasing amounts due to a variety of reasons.

At no time since the end of war have locally earned U.S.\$ funds been transferred to the U.K.; every cent earned has either been spent for imports from hard currency countries, outward remittances and travellers' allowances, or the money is still at the disposal of Exchange Control here or abroad.

The inevitable reduction in U.S.\$ allocations will bring about stronger demand by merchants on open funds. However, the current level of unofficial U.S.\$ prices ought not to be stimulated *à la hausse* since there remains, at least for the time being, an adequate amount of U.S.\$ coming to Hongkong which is not fully utilised by importers. Only speculative purchases of U.S.\$ (in notes, drafts or funds in America) could lead to an appreciation of the rate. The latter eventuality, while never to be ruled out in our economy which is so closely linked to China's, could of course induce fluctuations in the rate but over a period no change can be expected; the approx. 25% discount which sterling on unofficial markets experiences (i.e. an unofficial cross rate of around U.S.\$ 3) may continue for some time to come.

GOLD BUSINESS

The shuttle service of a flying boat carrying gold between Bangkok and Macao continues at great speed. Imports of gold are supposed to be piling up in Macao, but actually all gold is almost as quickly as it is unloaded shipped out of the Portuguese Colony. Much gold has been brought to Hongkong in transit for China, the final destination. Local market reports speak of several hundreds of thousands of troy ounces either already having arrived at Macao or being en route from Bangkok.

Profits of late have been better on account of the rising cross rate in

Shanghai and other trading places of China. On the other hand the gold prices in Bangkok have come down from a high price of 515 baht to about 492 baht per 15 grams, and at the same time the Siamese currency has shown weakness on the unofficial exchange (Hongkong quoted last week 100 baht in notes at H.K.\$ 22.70 to 22.90, T.T. Bangkok around 23% while Siam quoted T.T. Hongkong about H.K.\$ 4.05 for 100 baht). The equivalent of one tael of gold in Bangkok was at the close of last week around H.K.\$ 283; the bullion bankers and brokers were thus able to make a profit of 12 to 15% by selling gold from Siam in the local market, while sales of gold to China, after deduction of transportation and other sometimes considerable expenses involving bribes and profit-sharing by influential circles in China, on the average brought some 10% nett.

The local gold market transacted on the spot market 17,870 taels plus some 7,000 taels on Nov. 10 (public holiday) but to this amount have to be added the very large sales of gold for export to China which totalled daily several thousand taels.* The arrival of gold from Macao and also directly from Bangkok in this Colony has met with few accidents (seizures and prosecutions) only. The quantities involved are considerable.

Last week's highest and lowest prices per tael: \$332 1/4—\$319 1/2. Average cross rate: U.S.\$ 52 1/2 to 53 per oz.

The Chinese markets were bullish; while there was some rather illogical display of strength of C.N.\$ immediately after the disclosure in Washington that the U.S. Congress may be asked to grant a U.S.\$ 300 million aid program to China, the progress of inflation in China and the spectacular reverses suffered by the Nationalists

caused further depreciation of the Chinese money, and as a consequence gold prices rose steadily.

One troy oz. sold in Shanghai at the end of last week from 6 to 6 1/4 million; U.S. notes went up much faster touching C.N.\$ 100,000 but settling around 95,000. During the hectic days of last week the gold cross rate in Shanghai moved around U.S.\$ 57 to 60 per oz. During the mid-week Shanghai paid around H.K.\$ 370 to 375 per tael and large contracts were concluded in Hongkong on that basis which was 15 to 18% higher than the Hongkong quotation.

Gold business in Amoy and Swatow boomed. The Swatow traders have established long ago a prosperous gold exchange in their native city and, predominant as they are in the business life of Bangkok, they have been able to ship much gold from Bangkok to South China via Swatow, bypassing Macao and Hongkong. On the other hand Amoy gold traders have their supply base in Manila where market prices are much higher than in Bangkok but transportation and incidental charges considerably less. The gold cross rate in Amoy last week moved around U.S.\$ 60 per oz. The U.S.\$ black market bourse there is very lively and secret service activities are not efficient probably under the pressure of local authorities who object to the trade stifling operations of this sort of organisation.

Since the Chinese dollar of the Amoy variety commands a premium over the Shanghai dollar all prices of U.S.\$ and gold are relatively lower in Amoy (just as well as in Canton and other South China cities where the Shanghai dollar at times is heavily discounted). Amoy quoted towards the end of last week: gold C.N.\$ 5 1/2 to 5 1/4 million; U.S. notes: 88 to 90,000.

SILVER BUSINESS

Exports to the U.S. continue on a moderate scale with prices in New York at 74% cents and London quoting 45 pence for spot. Local prices remain on a high level: H.K.\$ 3.95 per tael, 3.30 per oz., 2.50 for silver dollars (Yuan Shih-kai dollars). Exports bring at present little if any profit as the T.T. New York rate is depressed, approx. H.K.\$ 5.15 per U.S.\$ 1. Since the Exchange Control requires exporters to sell 25% of their bills at the official rate (i.e. H.K.\$

3.95), allowing the free disposal of 75%, the proceeds of an ounce of silver will bring around H.K.\$ 3.60 only. The current rate of \$3.30 per oz. covers only costs f.a.s. Hongkong; freight, insurance and about 7 H.K. cents for refining per oz. have to be added. Only a higher T.T. New York rate will stimulate larger silver shipments to the U.S. alternatively a decrease in the price of silver in the local market will also improve exports (the current gold price of about \$266 per oz. is 800 times the silver quotation in Hongkong).

New York is buying silver which is in good demand by the public. Silver ware and ornamental silver, considered a good hedge against inflation in U.S., is now en vogue in U.S.

U.S. BUSINESS

Further heavy offerings of notes and drafts reduced local unofficial quotations while demand for T.T. New York was very small. The visit of the U.S. Navy from their big base of Tsing-tao caused the note rate to drop as hundreds of navymen were, for personal requirements, selling several tens of thousands of U.S. notes. Overseas Chinese remittances were offered in increasing amounts and home travelling Chinese upon arrival here were usually well stuffed with U.S. notes which they sold here, proceeds in C.N.\$ being remitted to their native province.

Highest & lowest rates for last week (in H.K.\$ per U.S.\$ 100): notes 508-502; drafts 512-506; T.T. 522-512. Cross rate per £: U.S.\$ 3.125 (high), 3.045 (low). Some business in New York's free market was reported done around U.S.\$ 3.05. Free sterling in various European markets after fetching as high as U.S.\$ 3.30 was moving around 3.20.

Merchants are generally of the opinion that the present low level of U.S.\$ quotations ought to present a welcome opportunity for speculators who anticipate an improvement in the rate. The continued tightness of money in the local market prevents such haussiers to hedge in U.S.\$; their stocks are not diminishing and new cargo keeps arriving which has to be paid for eventually. People with spare cash, however, may be able to make a speculative profit in the unofficial U.S.\$ market.

HONGKONG UNOFFICIAL EXCHANGE RATES (IN HK\$)

Nov.	Gold per Tael		C.N.\$ (per one million)				S'hai	Canton	U.S\$	(per 100)			Pound		
	High	Low	High	Low	Forward	T.T.				Notes	Draft	T.T.	I.C.\$	Guilder	Baht	Note
*10	329	324	63 1/2	63	—	58 1/2	65	505	510	514	10 1/2	29 1/2	18	12.80	
11	328	323	64 1/2	63 1/2	63	61	59 1/2	62	503	512	520	11	29 1/2	21 1/2	12 1/2
12	324 1/2	319 1/2	65	64	64	62	59 1/2	63 1/2	507	512	520	10 1/2	29 1/2	22	12 1/2
13	326	323	65	63 1/2	64	59	59	62	508	511	518	10 1/2	29 1/2	22 1/2	12 1/2
14	329 1/2	324 1/2	63	62	59	56	58 1/2	59 1/2	507	510	519	11	29	22 1/2	12 1/2
15	332 1/2	326	62	62	59 1/2	59 1/2	54 1/2	59 1/2	506	508	516 1/2	10 1/2	29	22 1/2	12 1/2

* November 10 having been a public holiday no market quotations were officially recorded; the above rates are unofficial rates of the unofficial exchange market.

BANK NOTE MARKETS

Piastres were changing hands on the spot market for a total of 6,640,000 million and the forward market transacted some 15 million at prices which remained unchanged around H.K.\$ 11 per 100 piastres. Haiphong merchants were keen buyers of piastres in Hongkong and there was also a good demand from Saigon.

Nica guilders remain neglected and depressed. The trading conditions in Java and the whole archipelago are not progressing well, movement of cargo is held up and the political situation is disappointing.

Siam's new regime at first caused local speculators to lose heart and the unofficial price dropped to H.K.\$ 18 but soon recovered and remained then at around 22% (per 100 baht). Bangkok quoted last week: (in baht or ticals); T.T. Hongkong 4.03 to 4.05; T.T. Swatow 260 (for one million Chinese dollars); U.S. notes 20½%; T.T. Singapore 7.30; T.T. Saigon 7.30; T.T. Saigon 0.46½; T.T. Rangoon 4.30. Transactions in baht have been heavy during recent weeks on account of gold shipments between here, Macao and Bangkok.

CHINESE DOLLAR WEAKNESS

The official open market rate remained unchanged in Shanghai but the unofficial rates advanced and by the close of last week U.S. notes sold at almost C.N.\$ 100,000 per U.S.\$ 1 while T.T. New York quoted some 3 to 5% higher. T.T. on Hongkong reached at one time almost C.N.\$ 20,000. There was great easiness in the money market of Shanghai following on a short spell of tightness earlier last week.

Transfers of capital from Shanghai to South China, although permitted only under special licence for larger amounts, gathered momentum; the total remittance from Shanghai to Canton for the first 2 weeks of November was estimated by bankers in Canton at C.N.\$ 600 billion. On the other hand, Canton remitted large sums to Hongkong which were estimated here at C.N.\$ 150 billion for October and some 100 billion for the first fortnight of November.

Local money market rates for one million C.N.\$ were last week (maximum and minimum prices in H.K.\$): —spot notes 65-62; forward notes 64-56; T.T. Shanghai 60-51 (lowest price for the year); T.T. Canton 65-57.

General conditions in North and Central China are distinctly deteriorating and the unrest among the urban population in the civil war affected areas is increasing. While the country population does not suffer from the effects of China's vicious inflation as much as the people in the cities, as Gen. Marshall so correctly observed when expatiating on the economic situation in China some time ago, they are exposed to almost intolerable legal and illegal exactions, conscription from both belligerents, requisitions and often

complete devastation. With the onrush of the Communist armies threatening to oust the Kuomintang troops from large areas north and even south of the Yangtze the Nanking Govt. is compelled to use every ounce of strength left which will also involve the spending of many more trillions of Chinese scrip for its army, navy and airforce.

BANKS IN CHINA

According to official Chinese statistics there are 5,141 offices of banks, native banks, exchange shops, trust companies and insurance firms in China: Government banks are 7 (with 717 branch offices); Provincial banks 26 (branch offices 962); City and District banks 379 (with 3 branches); Commercial banks 202 (branches 789); Native banking firms 495 (with 477 branches); Exchange shops 500 (branches 27); Trust companies 21 (branches 7); Insurance companies 139 (with 390 branch offices).

GOLD MINING IN CHINA

Gold prospecting is under the authority of Gold Mining Administration (established May 1939), controlled by Ministry of Economic Affairs. Annual output before the war was estimated at 350,000 troy ozs. but exaggerated claims, including Manchuria production put the maximum annual output achieved in one or two years at one million ozs. Pre-war output of Manchuria was estimated by Japanese sources at 100 to 120,000 ozs. per year.

In 1947 gold output was believed small although Government in Nanjing tried to boost production. The control measures enforced by Gold Mining Administration have stifled the spirit of enterprise by miners. Control is exercised by Government agents stationed at known producing centres. Much of the domestically mined gold, probably 30%, is sold in the black market with Government taking the rest. It is possible that 1947 gold mining in China may net the treasury some 200,000 ozs. (valued officially at U.S.\$ 3½ million, at average open market rate over 10 million).

CONDITIONS OF BANKING IN HONGKONG

Unlike many foreign countries including China which require the registration of all banking institutions with the government, no such legislation obtains in Hongkong and there is not exercised any control over their business and activities.

Under the new legislation in China all foreign banks, Chinese commercial banks, native banks, finance and trust companies, exchange shops and other banking establishments are required to register with the Ministry of Finance under various groups. Through this Ministry, the Chinese Government is in a position to control banking business in the country and to ascertain the amount of banking assets, loans

U.S. TREASURE TRADE

Exports and imports of gold and silver are regularly recorded by the U.S. Bureau of the Census. During recent months gold exports to the Far East have been considerable. During the two weeks of October ending 22nd, gold exports valued U.S.\$ 1,470,000 and imports U.S.\$ 60 million. Exports included Siam with \$451,212 the Philippines \$2,400, Macao \$8,947.

FOREIGN DEBT OF JAPAN

In our issue of Sept. 3, p. 336, Japan's sterling and U.S.\$ debts were given as at the beginning of the current year. As regards the total debt in sterling, Japan owes approx. £90 million, two thirds of which amount were owned by Japanese holders and one third (i.e. about £30 out of £90 million issued in London) by British and other European holders.

The Japanese-held £ bonds were, after March, 1943, compulsorily converted into Yen bonds at the then official rate of exchange (1/2d. per yen) while foreign nationals in Japan were left in possession of their bonds. The Japanese Govt. has always paid interest on the bonds; up to the conversion in 1943 on sterling bonds and later on the converted yen bonds. Japanese nationals received payment during the war years while foreign nationals' interest payments were credited to their special custody accounts, however, only up to March 1943. Payment of interest on converted yen bonds continues.

Default of interest payment exists only as regards bonds not held by Japanese, i.e. on about £30 million, but only for the war years or part of the war years. Nationals of neutral countries, like Swiss holders of Japanese sterling bonds, obtained payment of interest of the Japanese Gold Loan 1907 up to the end of 1941 (No applications were made for the 6% 1924 or the S. Manchuria Railway). Interest for the 4% Loan of 1910 was paid until June 1945 since when Japanese funds, just prior to the surrender, were exhausted.

and reserve funds. In case any bank is found guilty of illegal conduct in outlawed transaction the Ministry of Finance can cancel its license and close the establishment. In case a bank in China fails to honour the drawing of deposits by its clients and becomes bankrupt, the Ministry can place the bank's manager into police custody and seize its assets for disposal to its clients and creditors.

In Hongkong, things are, however, different. The government as yet has not introduced legislation requiring all banking institutions to register with the Financial Secretary. Banks have to register with the Registry of the Supreme Court under the Companies

Ordinance of Hongkong provided that they are constituted as limited companies. Apart from that, anyone may start a commercial bank, native bank, exchange shop or banking firm so long as he has some liquid capital and business connections.

Mushrooming Banks

For this reason, commercial firms and the common public have little, if any, confidence in those newly established and mushroom-like Chinese banks which were mostly set up here by Chinese immigrants usually from Shanghai and North China. The recent closure of the Tsen Ho Bank which has not yet honoured the claims of its depositors has aggravated the situation and made the general public further losing confidence in the newly established banks.

Due to ever-continuing depreciation in the Chinese national currency, more Chinese capital has kept coming into the Colony with some investors putting up banking firms and banks and others starting industrial establishments and engaging in various commercial enterprises.

It is hard to imagine that a commercial bank could be established here for business in postwar days with only a million dollars of paidup capital. However, it was done and has been proved in fact. Possibly, a large portion of such bank's paidup capital had been spent on the premises (plus keymoney) and other expenses prior to opening for business.

On the other hand, there are e.g. four Chinese investors from Shanghai who paid up a total capital of \$15 million for the recent establishment of an industry in the Colony. If the four investors had preferred to start banking business on the same scale as a bank recently opened with a paidup capital of \$1 million they might have exceeded a dozen.

Speculative Transactions

The postwar policy of the majority of banking institutions here has been quite different than that in prewar days. Apart from the regular and normal banking business, many of them, especially the newly established ones, prefer speculative transactions for better and quicker profits. As a result, some of the unlucky ones are often facing financial difficulties. As long as a bank has a stock of clients in order to carry on normal and regular business, it can stand on its feet and make legitimate profits. There is no danger of bankruptcy unless a bank engages in speculative enterprises and loses in such transactions which are often undertaken in direct competition with trading firms and brokers.

Banks In Hongkong

It is difficult to ascertain the exact number of commercial banks, native banks, exchange shops and other banking firms operating in the Colony.

Our estimate is that there are at present about 252 European banks, Chinese commercial banks, exchange shops and other banking firms functioning in Hongkong. Of these, 14 are European and American banks, 32 Chinese commercial banks, 120 native banks, 76 exchange shops and 20 other banking firms.

According to the Hongkong Chinese Bankers' Association, it had in 1941 a membership of 15 commercial banks with perhaps three or four unsuccessful applications by commercial banks who could not be admitted to the Association because of their unsatisfactory records.

The Association which is not functioning now is being re-organised and its articles of association will soon be discussed and may be revised. The Association is erecting a clubhouse on the roof of the Bank of East Asia Building for catering to the needs of bankers and their friends.

According to one of the prewar articles of H.K. Chinese Bankers' Association unless a Chinese commercial bank could prove at least two years operation in the Colony with good standing, it was not qualified to become a member of the Association. The "good standing" clause was interpreted by the Association's general committee. In other words, unless the general committee was satisfied that the applicant was of good standing, he was denied the privilege of becoming a member even if two years of operation in the Colony were recorded. Should this article of the Association remain unchanged when it is re-organised, many of the 32 existing Chinese commercial banks will not be able to join the Association and may then automatically lose their standing as a commercial bank at least in the eyes of the reputable bankers in Hongkong.

European Banks

The Supreme Court Registry provides for two kinds of registration for banks; one is Incorporation when the head office is in the Colony and the other is Registration in case of the head office being located outside of Hongkong. Of the local European and Chinese commercial banks only four are Hongkong incorporated banks viz.:—Hongkong & Shanghai Banking Corporation, Bank of Canton, Bank of East Asia and Wing On Bank.

Out of the 14 European banks operating in Hongkong five are British, four are American, two are Netherlands and one each of Belgian, French and Portuguese nationality.

The British banks are:—Hongkong & Shanghai Banking Corporation; Chartered Bank of India Ltd.; Thos. Cook & Son, Ltd. and E. D. Sassoon Banking Corp. The American banks are:—American Express Co., Inc.; Chase Bank; National City Bank of New York and Underwriters Bank Inc. The Dutch banks are:—Neder-

landsch Indische Handelsbank and Netherlands Trading Society. The Belgian bank is:—Banque Belge Pour L'Etranger. The French Bank is Banque de L'Indo-Chine. The Portuguese Bank is Banco Nacional Ultramarino.

Official exchange rates are fixed by the Exchange Banks Association of Hongkong which has 23 members and a committee of eight headed traditionally by the manager of the Chartered Bank of India, Australia and China. The Association includes six Licensed Exchange Banks who are not ordinary members of the Association but are granted inter-bank rate when trading with member banks of the Association.

The following four British, three American, two Netherlands, one French, one Belgian and 12 Chinese banks are members of the Exchange Banks Association: Chartered Bank of India, Australia and China; Hongkong & Shanghai Banking Corporation; Mercantile Bank of India; Cook & Son Ltd.; American Express, Chase Bank, National City Bank of N.Y., Netherlandsch Indische Handelsbank, Netherlands Trading Society, Banque de L'Indo-Chine, Banque Belge pour L'Etranger, Bank of Canton, Bank of China, Bank of East Asia, Overseas Chinese Banking Corporation, National Commercial & Savings Bank, Bank of Communications, China & South Sea Bank, Bank of Kwangsi, Shanghai Commercial Savings Bank, Chinese Postal Remittance & Savings Bank, Farmers Bank of China and Young Brothers Banking Corp.

The committee members of the Association are three British, one American, one Netherlands and three Chinese banks. They are Hongkong & Shanghai Banking Corporation, Chartered Bank (Chairman), Mercantile Bank, National City Bank of N.Y., Netherlands Trading Society, Bank of China, Bank of Communications and Bank of East Asia.

The six non-member but licensed banks of the Association are E. D. Sassoon Banking, Underwriters Bank and four Chinese banks: Kincheng Banking Corporation, Manufacturers Bank of China, Provincial Bank of Fukien and Provincial Bank of Kwangtung.

Chinese Banks in Hongkong

Since liberation at least 10 Chinese commercial banks have opened business here, their capital deriving mainly from China. How many of these newly established commercial banks could be admitted as members of the Chinese Bankers' Association after its re-organisation remains to be seen.

The names of the existing 32 Chinese commercial banks are:—Agricultural & Industrial Bank of China, Bank of Canton, Bank of China, Bank of Communications, Bank of East Asia, Bank of Kwangsi, Central Bank of China (maintains a temporary office

in the H.K. & Shanghai Bank Building (only), Central Trust of China (to be opened in December), China Industrial Bank of H.K., China & South Sea Bank, China State Bank, China Trade Bank, Chinese Postal Remittance and Savings Bank, Dah Sing Bank, Farmers Bank of China, Industrial Bank of China, Kincheng Banking Corporation, Kunming Commercial Bank, Kwangtung Provincial Bank, Manufacturers Bank of China, National Commercial Bank, National Commercial & Savings Bank, Overseas Chinese Banking Corporation, Provincial Bank of Fukien, Salt Industry Bank of Szechuan, Shanghai Commercial & Savings Bank, Sin Hua Trust & Savings Bank, South West Development Bank, Wing On Bank, Yieh Yieh Commercial Bank, Young Brothers Banking Corporation (Chu Hsin Chen Bank) and Yunnan Industrial Banking Corporation.

In addition, the General Administration of the Four Chinese Government Banks also maintain an office and a research department here.

Chinese Native Banks

The number of native banks in the Colony today is about the same as in 1941, although the volume of their business and their turnover were much expanded and increased.

The majority of the native banks and exchange shops are members of the Gold & Silver Exchange Society.* According to the registry of the Society, 100 out of the estimated 120 native banks and 61 out of the estimated 76 exchange shops in the Colony are registered with the Society, which provides for its members two trading sessions daily in gold, foreign currencies, silver and Chinese currency.

When compared with 1941, the present number of exchange shops is perhaps 30 percent larger.

The principal activities of native banks are: Chinese domestic remittances, foreign exchange, T.T. transactions, selling and buying of gold bars, Chinese currency spot and forward and foreign banknotes; furthermore, current and savings as well as fixed accounts.

The influence of the native banks on the Colony's commerce and finance is enormous. Many well-established and financially potent native banks often finance the biggest trade positions as well as industrial and construction projects. A few native banks have financial backing from local and Shanghai Chinese and European interests.

A big native bank usually has branches in Canton, and other leading towns in South China, Shanghai and

North China cities; many banks extend their activities as far as Malaya, the Philippines, Siam and Indo-China and where there are many overseas Chinese generally.

Evenly locally, many of the influential native banks possess branches and have set up agents under different names but all are operated by the head office for the purpose of buying and selling gold bars, Chinese and foreign currencies, etc. in order to avoid discovery by other native banks and outsiders. Very often, a big native bank transacts nothing in the Gold & Silver Exchange Society, and operates its business regularly through its branch or an agent.

The most influential and largest native banks who operate in the local financial and exchange markets include the Hang Seng Bank, the Dao Heng Bank, the King Fook Bank, the Cheuk Kee Bank, the Fat Cheong Bank, the Pa Tak Hong and others.

No Chinese native bank in Hongkong is ready to disclose its assets, turnovers and activities, which they consider "too secret" in transactions on the market and essential for competition with other native banks with success.

In many instances, native banks employ confidential fokis whose duties amount to "espionage" activities in finding out for their masters the assets,

policies, schemes, habits, turnovers, local, China and overseas connections, and activities of their rivals.

Generally speaking, the local native exchange market is in the hands of three big groups: the Shanghai, Cantonese and Fukienese "cliques". Sometimes the members of two clique join hands together and attempt to "defeat" in a certain operation the third clique, while at other times members of each clique operate individually and often in opposition to the temporary trend of the clique to which they belong.

Many of the European banks, through their Compradore departments, take part in, and sometimes strongly influence the operations on the native exchange market and some members at the Gold & Silver Exchange Society are regarded as dummies or "stooges" of one or the other European bank (or its Compradore).

The unprecedented prosperity of the native banks and other members of the G. & S. Exchange Society is to a large degree due to the continuance of wartime legislation as regards trade and finance. The Defence (Finance) Regulations are not fully observed by the public and, as it is the overriding intention of Government here to promote rehabilitation and development of the Colony, an unofficial exchange market operates through the good services of mainly the native banks and the larger exchange shops.

HONG KONG STOCK EXCHANGE TRANSACTIONS

for the week November 10 to 15:

Total sales amounted to \$1,265,861, against the three previous weeks turnover of \$1,780,957; \$2,652,420; and \$3,248,171 respectively.

Rates for the Week ending Nov. 15th:

Name of Stock	Highest	Lowest	Total Sales (No. Shares)	Rates on Nov. 17
H.K. Bank	1,980	1,930	10	1,950
Bank of East Asia	115	115	200	115
Union Insurance	750	750	82	750
Canton Insurance	380	375	50	385
China Underwriters	6½	6½	500	6
H.K. Hotels	24	23¾	8,400	24
H.K. Land Investment	80	80	200	79
Tramways	24¾	24½	5,200	24½
Star Ferries	133	130	300	130
H.K. Electrics	50	49	2,815	50
" (Rights)	37½	37	5,704	37½
China Light, old	21¼	20½	11,700	21¼
" new	16¼	16	1,300	16¼
Telephones (Old)	40	40	250	40
" (New)	36½	36½	100	36½
Cements (Old)	32½	32	1,500	31¾
" (New)	30½	30½	500	30¾
Rones	21	21	900	21
Dairy Farm	89	88	1,350	87½
Watsons	71	71	100	70
Wing On	140	140	100	140
Sinceres	8.20	8.20	500	8
Kwong Sang Hong	205	205	20	200
Raub Mines	5.05	5.05	200	5¼
Ewo Cotton	11½	11½	500	11

* The constitution and activities of the Gold & Silver Exchange Society of Hongkong were reviewed in our issue of July 9, pp. 153/4.

HONGKONG STOCK & SHARE MARKET

The market continued to drift sluggishly during the shortened week, Nov. 11 to Nov. 14, in reduced volume. Though some sessions were reported to have been monotonously dull and slow, evidences of increasing interest at present level of prices were not lacking.

Trading is said to be still of a selective nature, preference being shown for the more popular counters some of which are showing signs of resistance. Observers interpret this to indicate the market has bottomed, and look for steadier quotations and more general interest in the not distant future.

Heralding the declaration of final dividends for the current year is the announcement of the China Light & Power Co., Ltd. that the Board will recommend at the forthcoming annual Meeting of shareholders a final dividend of \$1 (making \$1.35 for the year) on the old shares, and 40 cents (making 54 cents for the year) on the new shares for the year ending 30th Sept., 1947. This will entail a total distribution for that period of \$3,807,000—the highest cash distribution in any one year in the history of the Company. Based on the closing quotation of 21½ the dividend yield is 6.3% per annum on the old shares.

Another Company whose financial year has closed is Watson. According to persistent rumours the net earnings of this company for the twelve months ending October 31st is in the region of \$15 per share. In addition to a substantial cash distribution a new issue of shares is generally expected. To cope with increased demand, both locally and from outports, output will be shortly increased by the installation of additional plant.

The financial year of most other companies end on the 31st December. Without exception all companies listed in the Stock Exchange are expected to present better reports and accounts for the current year. At present prices, in relation to reported net earnings, stocks are again attractive investments, and it is generally believed quotations will work higher.

The Felix Ellis price index of twelve representative, active local stocks showed a net loss of .87 for the four trading days compared to the previous week's close. Day-by-day his averages were: Nov. 11, 149.12; Nov. 12, 149.15; Nov. 13, 148.80; Nov. 14, 148.58. The low for the year was 123.88, while the high was 155.82 reached on May 3.

BANKS: Sales were reported in H.K. BANKS at 1930 and in Bank of East Asia at 115.

INSURANCES: In this section the following business was recorded: CANTONS 380 & 375; UNIONS 750; UNDERWRITERS, 6½; H.K. FIRES remained nominal at 300.

DOCKS, GODOWNS: WHARFS had buyers between 215 & 220 without at-

tracting sales, transactions however occurred in DOCKS at 34, 35, 34½ & 34. PROVIDENTS were dormant.

HOTELS & BUILDINGS: Less interest was evinced in HOTELS, probably because of the labour unrest; however, business was reported at 24, 23½ and 24, while LANDS old which have been quiet for sometime were traded in at 80.

There is much talk about a return of capital which the Hotel Co. may pay as the final instalment from its sale of the Palace Hotel, Shanghai, has arrived here some time ago. While it is realised that the Hotel Co. will re-invest the larger part of the proceeds in a profitable enterprise (Peak district) the shareholders are justified in expecting some benefit from the sale of Palace Hotel which affair was quite exciting and taxing the nerves of the less robust shareholders.

UTILITIES: This again proved the popular section. Business occurred in TRAMS at 24½ & 24½; STAR FERRIES at 133 & 130; CHINA LIGHTS old at 20½, 20½, 21½, 21, 21½, and new at 16½; ELECTRICS at 50, 49¾, 49 & 49½, and the RIGHTS at 37½ & 37; TELEPHONES old at 40 and new at 36½, Yaumati Ferries had bids up to 24½.

INDUSTRIALS: CEMENTS old had sales at 32½ & 32, and the new at 30½. ROPES had one sale at 21. DAIRY FARM showed more interest at present prices and came to business at 89, 88½ & 88 at which rate more buyers were in evidence. WATSONS had one sale at 71.

STORES: SUNS were in demand at 5 while EMPORIUMS improved to \$13 without attracting sellers. LANE CRAWFORDS and POWELLS were dormant with no enquiries. SINCERES came to business at 8½ ex dividend of 80 cents, while KWONG SANG HONG and WING ON were traded in at 205 and 140 respectively.

HONGKONG PUBLIC COMPANIES' NEW ISSUES, BONUS SHARES AND CALLS

During the year 1947 the following 13 public companies have either issued new shares, bonus shares or made calls on unpaid capital:

Bank of East Asia
Bonus of \$50 per share
in the form of 1 new
for every 2 old shares
—free—(27,993 at \$100
each) \$ 2,799,300
Issued 16,021 shares—1
new for every 5 old
shares at \$100 per
share 1,602,100

Canal Insurance
Bonus of \$30 per share.
This was utilised as a

call on the Company's
\$20 paid shares making
them \$50 fully paid
50,000 shares 1,500,000

H.K. Fire Insurance
Bonus of \$30 per share.
This was utilised as a
call on the Company's
\$20 paid shares making
them \$50 fully paid
40,000 shares 1,200,000

Union Waterboat
Issued 32,617 new shares
—4 new for every 5 old
—at \$7 per share ... 228,319

H.K. & Whampoa Docks
Issued 527,125 new shares
—3 new for every 5 old
—at \$20 per share . 10,542,500

Kowloon Wharf & Godown
Issued 90,000 new shares
—1 new for every 1
old—at \$100 per share—
1st calls of \$50 due on
or before 31.12.47; 2nd
call of \$50 due on or
before 30.6.48 9,000,000

H.K. Land Investment
Issued 100,000 new shares
—1 new for every 3
old at \$50 per share 5,000,000

H.K. Electric Co.
Issued 597,278 new shares
—2 new for every 5
old—at \$10 per share
due on or before
30.11.47 5,972,780

H.K. Telephone Co.
Three calls on 250,000
new shares (\$2.50
paid)—1st call \$2.50
paid 18.8.47; 2nd call
\$2.50 paid 18.10.47;
Final call \$2.50 due
18.12.47 1,875,000

Green Island Cement
Issued 97,779 new shares
—1 new for every 2
old—at \$10 per share 977,790

Dairy Farm
New Issue of 195,555 new
shares—2 new for
every 3 old—at \$15 per
share due on or before
31.3.48 2,833,825

China Emporium
Bonus of \$5 per share in
the form of 1 new for
every 2 old shares at
\$10 per share on 66,852
new shares

H.K. Tramways
Issued 1,300,000 new
shares at \$5 fully paid,
free at the ratio of two
new shares for every 1
old share 6,500,000

Total \$50,699,634

OIL FROM COAL

The Birth and Development of a New British Industry

(By A Special Correspondent)

England's available native oil is extremely limited, as borings have unhappily shown, while oil from shale mined in Scottish pits amounts to no more than a drop in the national bucket. The nation might have been forced to a mute acceptance of this situation had it not been for a plan conceived in the minds of British chemists and chemical engineers in the 1920's. These men aimed to accept the challenge thrown down by Nature, to worry out the problems involved and to set up a native petrol industry. Thanks to their efforts the foundations were laid for an industry which, at a critical period, produced 50,000,000 gallons of the finest aviation petrol yearly. The process which they had in mind was called hydrogenation.

Oil was a more valuable fuel than coal, and Britain had no oil. If she could turn coal into oil she could strike a blow against unemployment and add markedly to the security of the nation. But when the idea was first seriously put forward in 1926, it met with considerable criticism. Arguments about national security were not well received by people still convinced that they had only just fought "the war to end wars". Moreover, those who were economics-minded could see neither profit nor purpose in making petrol when the natural product could be bought cheaply and in unlimited quantities from overseas. Besides that, there was the plain fact that the task would call for prodigious expenditure on a complicated plant. Lastly, although the Germans were pushing forward with plans of a similar kind, there was no proof that the process could be worked at all. Nevertheless it was decided to begin work on the project.

The Hydrogenation Process

It was known that the heat and power obtainable from both coal and oil depended on the burning of their two main constituents, Carbon and Hydrogen. It was also known that oil differed from coal in possessing more hydrogen. The hydrogenation process makes use of this knowledge of the essential difference between the two fuels. A German, Professor Bergius, had pointed the way with a patent taken out as far back as 1913. Expressed in simplest terms, the process aimed at adding the necessary hydrogen to coal, thus converting it to oil under high temperatures and pressures. The Germans had been developing hydrogenation for the conversion of their own natural raw materials—brown coal and lignites—but the idea of adapting it to the black or bituminous coal of Britain raised a new set of problems.

It so happened that the recently constructed factory at Billingham for the production of synthetic ammonia

possessed considerable experience of the technique of high-pressure work and was already a huge producer of that essential element of the process, hydrogen; moreover, the works was ideally situated on the rim of the Durham coalfield.

Research, begun in 1927, went ahead with no more difficulties than were to be expected. The hydrogenation necessitated raising the pressure of the hydrogen to about 250 atmospheres, or 3,750 lb. per square inch, and its temperature to about 450° C. The reactions involved and the designing of plant to work at these extremes constituted major problems.

Progress in Oil Production

By 1929, however, some gratifying progress had been made, culminating in the erection of a pilot plant which was able to hydrogenate ten tons of coal per day; oil, man-made from British coal, had proved a practical proposition, but the road to full development still stretched onwards.

Research and development work continued, and in 1931, after consultation with the Government, Imperial Chemical Industries accepted an opportunity to exchange technical information with American, German, and Dutch companies which were working on similar lines. A great deal was learned from these contacts, but they also served to show that our knowledge of coal hydrogenation was already greater than that of others in this little-known field.

The project received a great impetus in 1934, when the Government, which had been taking an encouraging interest in all developments, decided to give financial preference to home-produced fuels. This important change of policy justified Imperial Chemical Industries in authorising the construction of a large-scale plant for commercial production which, it was reckoned, would cost over £3,000,000 and handle 400 tons of coal a day.

The net result of the hydrogenation process is that coal is converted into 20% petrol, 40% of a "middle oil", and 40% of a heavy fuel oil. The petrol and "middle oil" are afterwards converted into petrol of whatever quality required by a similar process in two stages.

Production of Various Oils

The fact that hydrogenation can be modified and adapted to produce fuels of various types is one of its most valuable characteristics. The fuel requirements of the lorry are as different from those of the racing car as those of the radial aero engine are from the "jet". Yet all these can, and have been, met from Billingham by modifications of the hydrogenation technique.

Early on, when the full-scale plant was still in the design stage, it was

decided to add equipment so that creosote oil—a by-product obtained when coal is cooked—could also be hydrogenated. As things worked out, the creosote units were the first to be completed, and they were able to start production in February 1935. The final stages of the coal plant produced a crop of problems which delayed its completion for another three months, buy and tea.

This plant was opened in October 1935. In the following year production reached the highly satisfactory figure of 120,000 tons of petrol, or 36,000,000 gallons. Output continued roughly at this level until the outbreak of war, the Billingham petrol being sold to the oil companies, through whom it found its way to the garage and the wayside filling station.

War-Importance of Synthetic Oil

At the beginning of this article it was recorded how the sponsors of the hydrogenation project had laid emphasis on its importance to national security. Ten years had to pass before there was an official echo of the pre-science. In that year the Committee of Imperial Defence appointed a sub-committee "to consider and examine the various processes for the production of oil from coal, and to report on their economic possibilities and on the advantages to be obtained by way of security of oil supplies in emergency". This sub-committee came down heavily on the side of hydrogenation, of which Imperial Chemical Industries was still the lone pioneer. It was said the sub-committee, the only practicable and speedy way of increasing the output of home-produced oil, but they added a rider to the effect that high capital outlay and production costs would limit its extended use in the future.

The Air Ministry was becoming more and more interested in getting large quantities of 100-octane aviation fuel. No one, not even America, was at that time producing it in any significant quantity. Aero engines were then in the throes of high-speed development. New and better fuels were imperative, to keep pace with each mechanical advance. Billingham could perhaps do something about it, said the Ministry; but Billingham knew that rapid production of aviation fuels was too expensive so long as the process was based on coal. Coal demanded too much plant and too much hydrogen. A new starting-point was needed. This was discovered in gas oil, a type of petroleum lying between paraffin and heavy diesel oil.

Production of 100-octane Fuel

In 1938 the Air Ministry accepted Imperial Chemical Industries' plans for basing plans for the future manufacture of aviation fuel on the hydrogenation process. The petrol produced by this process was superior to any other known at that time. To make fuel of the grade known as 100-octane fuel it is necessary to make a special blend with the synthetic spirit known as iso-octane. The hydrogenation process, when it is used to make avia-

tion spirit, fortunately produces a gas called butane, from which iso-octane can be manufactured.

The general plan was that additions were to be made to the Billingham works of Imperial Chemical Industries for the production of the maximum amount of 100-octane fuel from coal or from creosote there, and that a new works was to be built on an entirely new site. Heysham was chosen for the latter plant, and it was decided to form a new company between Imperial Chemical Industries, the Shell Company and Trinidad Leaseholds to build and operate this factory. An entirely new site was chosen because, among other things, it was thought that production at Billingham would be difficult, to say the least of it, in wartime.

The plant staff at Billingham had already decided that any serious air attacks would make it difficult to maintain production on the coal units. When "the balloon went up", therefore, Billingham concentrated on the hydrogenation of creosote—a by-product of the coking industry—and made 87-octane aviation fuel, pool motor spirit, and 100-octane aviation spirit according to requirements.

As things turned out, Billingham never received the heavy visitations from the Junkers and Heinkels that it anticipated. It did not in fact receive its first visit until 19th June, 1940. During the next two years it experienced numerous warnings and suffered a further ten effective raids, and over a hundred high-explosive bombs were dropped within its area; but damage was slight. It was only the twelfth and last attack, in July 1942, that did any real hurt. Then a bomb fell plumb in the tank "farm", where a million gallons of petrol were stored.

Any limitation on the petrol plant's output during the first years of war were not therefore imposed by the enemy but by the British Government demanding more and more nitrogenous fertilisers. These made a heavy demand on Billingham's production of ammonia, which in turn drew heavily on its output of hydrogen. Consequently there was a decline in Billingham's petrol production from a peak in 1940 of 154,000 tons to 86,000 tons in 1943.

Bulk Production of Aviation Spirit

It would be a mistake, however, to reckon the wartime contribution of Billingham's petrol plant and personnel purely in terms of gallons of fuel produced. Equally important were the knowledge and experience, and the cadre of hydrogenation experts, which it placed at the Government's disposal. These experts, joining the crops of specialists drawn from the great oil companies, were the brains behind the great Heysham project plans for which were approved early in 1939. Bulk production of aviation spirit began there in June 1941. The Imperial Chemical Industries works at Billingham also made its maximum output of aviation spirit and acted as the fountain-head of research on fuel problems.

ATOMIC ENERGY IN MODERN INDUSTRY

The Production of Power from Splitting of the Atoms of Uranium, Plutonium and Thorium

(By A SPECIAL BRITISH CORRESPONDENT)

Much of the essential information concerning atomic energy is still covered by conditions of secrecy. However, sufficient detail has now been freed from restriction for it to be possible to draw some general conclusions which cannot be far from the truth. *The secrets of atomic energy are largely technological details of industrial processes and precautions; the fundamental scientific information is mostly available to all.*

Atomic energy, in its present sense, is energy set free when certain special kinds of atoms of uranium or of plutonium split into two parts in a pro-

cess known to physicists as atomic fission, which is brought about by the absorption by these atoms of particles which are called "neutrons" because they carry no electric charge.

Uranium, Plutonium, Thorium

Uranium is the heaviest and most complex of the chemical substances existing on this earth. It is a metal, found as chemical compounds in very minute quantities in most primitive (igneous) rocks, and which is concentrated into richer deposits in a few places only on the earth's surface. (Continued on page 602)

The high-power output of aviation spirit is dependent only partly on the quality of the base fuel itself; the finished spirit is a blend of special petrol, iso-octane, and sometimes other materials as well. There are also special chemical dopes which are put into it. All these steps made possible the use of a high compression ratio and supercharge which give a very high power output for a given weight of engine and fuel without "knocking". Knocking is annoying to the motorist, but it is disastrous in an aircraft engine.

Every fuel is given a knock-rating, which is expressed as an octane number. Pool petrol has an octane number of 70 and in consequence is quite unsuitable for high-efficiency engines. The development of T.E.L., or tetraethyl lead, and its addition during the war to pool petrol raised its octane number to 80, which was adequate for not only civilian but also military vehicles. T.E.L. made it possible to produce the aviation spirit of octane number 87 and, with other constituents, fuels of 100-octane number and over. Associated Ethyl Company placed at the Government's disposal full information on the production of T.E.L. and with this I.C.I. put a plant into operation for making it.

Another compound desperately needed was ethylene dibromide. It was not easy to produce, since the only British source of bromine is seawater. Nevertheless, with American help, the difficulty was surmounted, and a plant to make ethylene dibromide was built on the Cornish coast at Hayle.

The Production of Victane (Butyl Benzene)

The greatest Imperial Chemical Industries contribution in this field was, however, yet to come. Much thought had been given to the production of an aviation fuel to allow an even higher power output, and hence speed, than that given by 100-octane fuel. *The new fuel was to be called "Grade 150."* It was decided that it would be made with the aid of two additions to aviation fuel, "Victane" and monomethyl aniline.

"Victane" was made on an improvised plant at Billingham at very short notice

at the beginning of 1944. The real name of the material made was butyl benzene, but it was thought at Billingham that "Victane" was shorter and more appropriate.

A process for making monomethyl aniline was worked out by the Dyestuffs Division of Imperial Chemical Industries, and the first trial batches were made by them at Huddersfield, Yorkshire. The Alkali Division then took up the matter, and early in 1944 they began production on a big scale.

By blending together Billingham petrol, Heysham petrol, iso-octane, monomethyl aniline and "Victane", grade 150 fuel was produced, and its arrival was providential because it coincided with the coming of the flying bomb to the south of England.

Those then living in and around the Metropolis will not soon forget the impact of the V.1's on nervous systems already taut through years of blitzing. The demoniacal noise of the doodlebugs' approach shock even the most stolid and phlegmatic members of the British population. The fact that the authorities were not immediately able to announce a defensive weapon did nothing to allay public anxiety, and the things obviously had the heels of Britain's fighters. Grade 150 fuel enabled the best of these fighters to overtake the flying bombs and shoot down those which escaped the anti-aircraft barrage.

On the 4th July, 1944, a Cabinet Minister wrote to the leader of the Billingham hydrogenation team: "The record of operation at your refinery over many months is one in which all concerned can be justly proud, and you can be assured that there is no lack of appreciation of the fine work that has been done".

Billingham has not yet found it possible to restart the hydrogenation of coal while it is in such short supply, but the plant continues to function with creosote as its raw material.

There can be no doubt, however, that the last has no been heard of the native oil industry which British genius and energy brought to realisation on the salt flats of Durham.

Plutonium is an artificially made substance, heavier and more complex than uranium, which is made from uranium itself. A similar, and equally useful substance, is a kind of uranium which can be made artificially in a similar way from thorium, a metal found as a mineral in monazite sands. These sands are rather plentiful in certain parts of the earth. Thus the primary raw materials from which atomic energy can be obtained are uranium and thorium. Until recently uranium was mined only to abstract radium, which occurs in very small quantities in its ores, while thorium was used as a constituent of gas mantles and as a refractory. Further search for these minerals will be stimulated by the new discovery and other important sources are certain to be found.

The fission of a single atom of uranium or thorium by the absorption of a neutron produces only a very small amount of energy. It is only when most of the very large number of atoms, constituting say a pound of uranium or thorium, have been split by this process, that the enormous energies become available. The basic scientific problem is, therefore, to make most of the atoms in a lump of uranium undergo fission, more or less by themselves. Because fission is best caused by neutrons moving very slowly, a supply of a very large number of slow neutrons, will be necessary. This is made possible in principle because, when an atom undergoes fission several neutrons are liberated from it, and by slowing these neutrons down sufficiently they can be made to split other atoms and so on. In this way the atoms of uranium etc. can be made to split themselves on quite a large scale, once the process is started, by introducing some neutrons to cause the initial fissions.

Uranium Piles

This process was successfully carried out during the war and occurs in what are called "piles." These piles are constructed so that rods of uranium are distributed amongst blocks of very pure graphite or carbon, whose purpose it is to slow down the neutrons which are produced during the fission process. If an atom is made to undergo fission by some externally injected neutrons, more neutrons are liberated when the uranium splits and these wander through the carbon in a haphazard and zig-zag manner until they eventually reach one of the uranium rods, thus penetrate into some uranium atoms and cause them to split in the manner of fission.

Further neutrons are thus liberated and they in their turn wander through the graphite until they reach another uranium rod and the whole process is repeated. Such a self-propelling action is referred to as a chain reaction and occurs with much more rapidity and violence in an atomic bomb.

One pound of uranium or thorium is capable of producing as much energy as the complete combustion of 1,500 tons of the best coal. The energy is

produced as heat in the active material in the "piles," and must be extracted by cooling the piles with water or gas. These cooling substances are thereby heated and can be used in steam or gas turbines to drive electrical generators. The fission products into which the uranium or plutonium split are highly radio-active, giving off enormous quantities of X-rays and other harmful radiations from which workers must be protected. The neutrons, which are present in very large numbers inside the piles, are also harmful to life. It is necessary, therefore, to enclose the working pile and its associated equipment inside thick walls of concrete and steel.

Atomic Energy Plants in Operation

It might be of some interest to have a description of atomic energy plants in operation as they are to-day visualised, for providing electric power for industrial and domestic consumption. At this stage it is not possible to do more than to make an intelligent guess about the exact form of such a plant, and it might well happen that some brilliant developments in the application of the new energy will change completely the picture.

In a fairly isolated area about 50 or 60 miles from some large city, there could be built a "primary" power plant. This might consist of one or more large uranium "piles" in which uranium rods or bars are dispersed through a mass of a "moderator," such as pure graphite or beryllium. The uranium which is heated by the nuclear reaction, would be cooled by a stream of neutral gas such as carbon dioxide or helium. This gas would be forced through the piles by compressors and would then expand and cool in gas turbines. After cooling in heat exchangers, through which water is passed, the gas would return to the compressors. The turbines operating at an elevated inlet temperature, would extract as much as 40 per cent. of the heat energy and convert it into mechanical power, which would drive electric generators of conventional type. Power would be distributed to the city and the countryside by means of electric cables in exactly the same way as electric power from coal is distributed at present.

This power station would have associated with it a large chemical plant, the function of which would be to remove periodically from the uranium rods the accumulated waste products of uranium fission, together with a certain amount of plutonium. This same chemical plant would extract uranium from the ore for use in this and other power plants. The piles, and a large part of the chemical plant, would be shielded by concrete walls, many feet in thickness, or in excavations in the ground, in order to protect workers from the harmful effects of the penetrating radiations produced.

Atomic Power Plant

We will assume an installed capacity of generating plant of 300,000 KW. With a thermal efficiency overall of 30 per cent. the piles must generate a minimum of about 1,000,000 KW. of heat energy, two-thirds of which will be wasted in warming the cooling water. (This wasted heat could be used to aid the evaporation of salt water for the production of salt, bromine and other chemicals.) With an average load of 50 per cent. of capacity the total number of kilowatt-hours of electricity generated per year would be about 1,000 millions.

If this power were generated by burning good steam coal about 600,000 tons would be needed each year. The amount of uranium required to replace this coal would be about 400 lbs. if it is used with 100 per cent. efficiency, or if we assume, as is more likely at first, an efficiency of 5 per cent., about four tons of uranium would be ample. The power station could not be started up with only four tons of uranium. Several hundreds of tons would be locked up in the piles and chemical plant and would constitute part of the capital cost of the system.

This atomic power station would produce plutonium as a by-product at a rate of about 1 lb. per day. Plutonium, after "denaturing," is an excellent concentrated "fuel."

Economics of Atomic Power Production

Various estimates have been made of the costs, capital and recurrent, involved in the erection and operation of atomic energy power plants using uranium. It is clear that the "fuel" cost is negligible, even if uranium costs £50,000 per ton. Running costs will be largely costs of chemical treatment. When generous allowance is made for all these expenditures, including interest and amortization of capital, it is concluded by engineers and economists who have examined this problem in U.S.A., that the cost of electric power would compare favourably with that for efficient coal-burning stations.

Valuable by-products of such an atomic energy power plant would be artificially radio-active chemical elements of great use in medicine, industry and scientific research, plutonium which can be used in secondary power stations, together with the chemicals derived from use of the low-grade heat in the cooling water.

There is a very serious difficulty in this hopeful picture. The plutonium produced in the piles can be used to make atomic bombs. Before such power plants can be built the international problem of preventing warlike use of this and other by-products must be solved.

COMMERCIAL MARKET REPORTS

VEGETABLE OIL MARKET

The failure of Bekoy & Co. to deliver all vegetable oil which local exporters and private financiers had paid for (vide our issue Nov. 5, p. 553) continues to depress the market although negotiations for partial settlement of the Chinese firm's obligations are carried on and prospects are not unfavourable for a conclusion of this incident. The managing owner of Bekoy & Co. claims, and probably with some justification, that considerable seizures of especially edible oil shipments to Hongkong and non-fulfilment of contracts in Canton, Wuchow, etc. were the immediate cause for his inability to live up to his obligations; however, the amounts involved in this failure are far larger than claimed seizures and defaulted shipments by native oil dealers and brokers. The progress of the private investigations has been slow which is regrettable in view of the uncertainty which lingers on in the market.

There has been a very slack trading period during the last fortnight which was partly due to seasonal decrease in supplies coming down here, the self-exclusion of C.V.O.C. from larger business deals during recent weeks, and the nervousness which was caused by the Bekoy failure.

Local native market quotations last week showed a slight downward trend. Tung oil sold around \$157 per picul, rapeseed oil \$146, teaseed oil \$150, sesame seed oil \$270, peanut oil \$173. Malayan and Siamese coconut oil quoted around \$120, and the essential oils were hardly transacted; cassia oil at \$970, aniseed oil: no business.

Olive Oil

As pointed out previously in this Review the crushing of olives and refining of olive oil has been studied by several Chinese companies and exporters, after having made inquiries abroad and dispatched samples to potential customers in Europe, appear to be hopeful of a good market provided that Chinese supplies of a reliable quality can be made available with the assurance of regular deliveries f.o.b. Hongkong. The field so far has been neglected and only since middle of this year some serious efforts were made to organise this business.

The potential total of olive oil available for export from Hongkong may not exceed 500 tons (olives in China are grown mostly in some parts of Kwan-tung and in southern Fukien). If Chinese olives were collected by an organisation, a regular market price for the crop could be established, the olive crushing be speedily effected, and the crude oil adequately refined in refineries both in Canton and Hongkong, there should ensue a small but prosperous industry.

Plans are now developed which combine the construction and operation of refineries for crude oil (capacity 100 tons annually upwards) and edible vegetable oil as well as essential oils (the latter as a sideline). Refining of tung oil in Hongkong in the same plant may as well be considered. At present there is not one oil refinery operated here although before the war this industry was doing rather well.

Improvement of Low-grade Tung Oil

A new process for the improvement of low-grade tung oil in storage tanks of any capacity (10 to 100 tons) in Hongkong has been perfected by an American returned Chinese oil expert. By adding a small quantity of a certain chemical to low-grade tung oil the quality will be improved to standard export grade. The improved oil passes all chemical and physical tests as required by the American Society of Testing Materials (Worstell Heating Test, Iodine and Saponification and Acid Numbers, Refractive Index, etc.) and furthermore it furnishes better drying power, tougher and elastic film of paints and varnishes.

The difference in price between low-grade and export-grade tung oil is about \$120 per ton; the cost of the chemical process for improvement plus handling charges is estimated at \$25 per ton; accordingly the new process should allow the netting of an additional profit of some \$95 per ton. No additional equipment is required except the storage tanks which already exist in the Colony.

Elimination of Moisture in Vegetable Oils

Another interesting development for the improved marketing of vegetable oils is a process of steaming of vegetable oils for the purpose of eliminating all moisture and thus obtain higher prices in foreign markets. This steaming process is to be carried out in storage tanks and is thus a very economical method.

The American specification for tung oil limits moisture to 0.2% maximum; if there is an excess in moisture up to 1%, buyers in the U.S. cannot reject the cargo, however, the seller has to pay double the excess plus 1/2% of control price (e.g. if moisture is 0.4% then 0.4 minus 0.2 times 2 plus 1/2%). The maximum allowed for impurities is 0.1%; any impurities up to 1/2% refund at contract price; if over 1/2% buyers may reject cargo. The maximum for free fatty acid for tung oil is 4%.

The American specifications for Teaseed oil: new crop: free fatty acid 3% maximum; moisture and impurities

combined 1/2% maximum. Old crop: free fatty acid 5% max. Impurity and moisture combined: 1/2% max.

Rapeseed oil: free fatty acid 4% max. Moisture and impurities combined 1/2% maximum.

Sesame oil: free fatty acid 5% max. Impurities and moisture combined 1/2% max.

Olive oil: free fatty acid 3% max. Impurities and moisture combined 1/2% max.

Copra Sales

Philippine copra exports in October totalled approx. 100,000 long tons, bringing the ten month total for 1947 to 801,494 t., against 423,000 t. in the same months last year. Exports included: U.S. 75,498; Belgium 4,200; Italy 3,955; Norway 2,602; Poland 700; India 4,000; South Africa 8,497; Panama Canal Zone 200 tons.

Last week's prices in New York moved around U.S.\$ 250 per short ton, c.i.f. U.S. ports, an advance of \$25 over the previous week.

WOLFRAM ORE AND TIN

Little wolfram ore is these days arriving here: smuggling from Wai-chow has petered out although irregularly some lots are arriving here. The market price has advanced to \$400 per picul.

Chinese and foreign tin is being stockpiled to a moderate extent by dealers and some outside merchants who expect that the international tin price may be raised by the beginning of 1948. Reports from Singapore encourage this trend. A picul of tin sold last week around \$450.

There was again no business in antimony crude or regulus.

PROHIBITED EXPORTS

As from Nov. 13 the exportation of sunnny bags has been prohibited under Prohibited Exports Order, 1946. Exporters have to obtain export licences from the Dept. S.T. & I.

LONDON METAL PRICES

Consumers' buying prices officially fixed by the British Ministry of Supply. Prices are in £ per ton (2,240 pounds) and include duty and delivery charges to consumers' works.

	(U.S. cts. per lb.)
Copper	132 23.75c
Zinc	70 12.593c
Tin	487 78.62c
Lead	90 16.191c
Aluminum	80 14.89c
Antimony (90%)	180 32.87c

NEW YORK COMMODITY PRICES

(Average Prices in U.S.\$)

Copper, electro, lb.	.215
Aluminum, lb.	.15
Lead, lb.	.15
Zinc, Prime Western, lb.	.11
Tin, Straits, lb.	.80
Antimony, lb. (carloads)	.34
Quicksilper, flask, 76 lbs.	.82
Pig iron, No. 2, Phila., ton	42.50
Steel billets, Pitts., ton	46-50
Steel scrap, Pitts., ton	38.00
Hides, packers, light, lb.	.32
Calfskins, 9 to 12 lbs.	9.00
Crude oil, Bradford, bbl.	4.50
Coal, furnace, ton	17.75
Cotton, Mid. 15/16", lb.	.3115
Print cloth, 64/60, 28½", yd.	.25
Rubber, No. 1 sheets, lb.	.18
Wool tops, lb.	1.775
Wheat, No. 2, red, bu.	3.12
Sugar, granulated, lb.	.084
Coffee, Santos 4, lb.	.27
Butter, 92 score, lb.	.77
Turpentine, Savan'h, gal.	.6275
Linseed oil, lb., carlots	.30
Burlap, 7½ oz. 40 s. yd., cit.	.16
Burlap 10 oz. 40 s. yd., cit.	.28

LONDON STEEL & IRON PRICES

(Current export prices per gross ton)

Plates, ¾-inch and up	£19 8s
Boiler plates, ¼-inch	22 17s 6d
Boiler plates	20 5s 6d
Chequered plates, ¼-inch and up	21 13s
Angles and joists	18 13s
Channels, 3-inch web and under	22 11s
Angles and tees, 4-inch and under	22 11s
Flat bars, 5-inch wide and under	22 11s
Rounds and squares, 3- inch and up	19 13s
Rounds and squares, under 3-inches	22 11s
Reinforcing bars	21 18s
Tin plates, sponsored, basis I.C., f.o.b. (100- ton min.)	2 2s
Tin plates, commercial, basis I.C., f.o.b.	2 12s 6d
Tin plate wasters, f.o.b.	1 16s

IMPORT CONTROL
OF BURMA

The Government of Burma announced on September 30 a revised import control policy with a view to ensuring a favourable trade balance and stabilizing its currency.

Open General Licence No. 1 has been withdrawn with effect from September 30, and replaced by a fresh Open General Licence applicable to imports from the United Kingdom and other Empire countries except Canada and Newfoundland. The new Open General Licence covers only a very restricted list of items,

HONG KONG TRADE
FOR OCTOBER, 1947.

(By A Trade Analyst)

The continued rise in Hong Kong's trade is again in evidence in the figures for October published by the Imports and Exports department. Although there was a small drop in exports from \$118,244,684 to \$115,019,260 imports rose by no less than \$17 million, from \$133,132,899 to \$150,703,667. The main increases in imports were textiles, which, compared with the previous month rose by \$7 million, sundries rose by \$7 million, foodstuffs \$3 million, building materials, oils and fats, chemicals and mineral ores (\$1 million each). There was a decline of \$2 million in imports of dyes.

Major increases in exports were metals \$8 million, foodstuffs and textiles \$4 million, sundries \$3 million, but these were offset by a drop in the export of oils and fats by \$10 million.

Imports from the U.K. rose by \$3 million, chiefly piecegoods, textiles, chemicals and vehicles but exports to the U.K. were down by \$1½ million in oils and fats.

Trade with the Empire generally showed little change. A drop of \$2 million imports from Burma was due to fewer rice shipments from that country but Malaya sent an additional \$2 million of nuts, oils and fats and sundries. North Borneo also sent additional supplies of oils and fats.

Exports to Malaya, on the other hand, were down by \$3 million of which foodstuffs accounted for \$1 million and textiles for a similar amount.

Exports to South Africa, however, increased by no less than \$4 million, mainly sundries.

Increasing supplies of commodities are becoming available from Europe.

Imports from Belgium were up \$3 million, mainly metals (\$2 million) and paper (\$1 million), although exports of oils and fats to that country dropped by \$2 million.

France also sent an additional \$2½ million, which were mainly chemicals, dyes and paper. The large increase in the export of oils and fats made in the previous month was not maintained, and exports to France dropped by \$6½ million.

The export of oils and fats to Italy were also down by \$1½ million, and to Holland by \$2 million.

Imports from North China rose by \$4½ million, mainly textiles, but those from South China dropped by \$4 million, mainly metals and oils.

Exports to North China fell away by \$1 million, mainly foods and oils, but the export of piecegoods to North China showed a welcome increase.

Exports to South China dropped by \$3 million mainly textiles, paper and oils and fats.

The export trade to China is less than 50% of what it was 12 months ago, and the import trade from China is no better than it was in October, 1946. With all the countries with which Hong Kong trades, China appears to be the only one which has not yet realised that if you open the gates to imports, the exports come pouring out. Elsewhere in Asia, trade continues to be good.

Exports to Japan increased by \$2 mil-

lion of oils and fats.

Imports from Macao were up by \$5 million, mainly oils and foodstuffs, while exports to the Portuguese Colony increased by \$1 1/4 million, mainly metals, oils and textiles.

Siam showed large increases in both imports and exports. Imports of oils and fats were up by \$2 million and sundries by \$1 1/2 million, while exports to Siam were increased by \$4 million of textiles.

Imports from U.S.A. showed a slight fall. Imports of dyes were down by

\$3 million, but sundries increased by \$1 1/2 million.

Exports to U.S.A. showed a remarkable rise of \$10 million. The export of metals was up \$7 1/2 million, oils by \$3 million and of nuts by \$1 1/2 million.

It is interesting to state the relative positions of our chief trading partners. Our major supplier is still U.S.A. followed by South China, the U.K., Malaya, Macao and Siam.

Our chief customers are Malaya, South China, U.S.A., Siam, Macao and the Philippines.

THE TRADE OF HONG KONG FOR OCTOBER AND FOR THE FIRST TEN MONTHS OF 1947

Imports of merchandise into the Colony of Hongkong during the month of October, 1947 amounted to a declared value of \$150,703,667 as compared with \$107,503,186 in the month of October, 1946. The figures include Government sponsored cargoes.

Exports of merchandise totalled a declared value of \$115,019,260 as compared with \$93,638,112.

Imports during the first ten months of 1947 amounted to a declared value of \$1,205,296,966 as compared with \$739,121,324 in the first ten months of 1946.

Exports totalled \$967,873,479 as compared with \$610,083,368.

TOTAL VALUES OF IMPORTS AND EXPORTS UNDER MAIN GROUPS BY COUNTRIES FOR THE MONTH OF OCTOBER, 1947.

UNITED KINGDOM

	Imports	Exports
	\$	\$
Building Materials	105,515	—
Chemicals & Drugs	979,932	10,536
Chinese Medicines	—	12,982
Dyeing & Tanning Materials	495,676	29,600
Foodstuffs & Provisions	461,947	71,455
Hardware	600,848	—
Liquors, Intoxicating	183,729	—
Machinery & Engines	682,497	—
Manures	196,194	—
Metals	1,418,578	102,480
Minerals & Ores	2,841	82,181
Oils & Fats	43,685	1,491,399
Paints	348,978	—
Paper & Paperware	351,300	—
Piece Goods &		
Textiles	4,368,697	—
Railway Materials	2,960	—
Tobacco	2,030,459	—
Vehicles	1,207,692	—
Wearing Apparel	974,387	15,333
Sundries	3,043,663	1,310,784
Total	17,499,578	3,126,750

AUSTRALIA

	Imports	Exports
	\$	\$
Building Materials	54,000	—
Chemicals & Drugs	110,489	4,350
Chinese Medicines	—	17,344
Dyeing & Tanning Materials	55,326	—

BURMA

	Imports	Exports
	\$	\$
Chinese Medicines	3,600	98,356
Foodstuffs & Provisions	556,640	61,142
Hardware	—	45,043
Metals	—	105,000
Paints	—	13,294
Paper & Paperware	—	27,281
Piece Goods &		
Textiles	—	313,046
Vehicles	—	6,000
Wearing Apparel	—	235,200
Sundries	40,881	165,225
Total	601,121	1,069,587

CANADA

	Imports	Exports
	\$	\$
Building Materials	207,013	—
Chemicals & Drugs	82,601	—
Chinese Medicines	22,400	18,185
Dyeing & Tanning Materials	38,052	—
Foodstuffs & Provisions	384,127	56,512
Hardware	16,744	184
Liquors, Intoxicating	33,052	—
Machinery & Engines	136,380	—
Metals	116,880	—
Nuts & Seeds	2,128	—
Oils & Fats	86,301	—
Paints	73,658	—
Paper & Paperware	224,816	891
Piece Goods &		
Textiles	—	1,395
Tobacco	100,000	482
Vehicles	63,820	—
Wearing Apparel	2,364	—
Sundries	167,923	26,617
Total	1,758,259	104,266

CEYLON

	Imports	Exports
	\$	\$
Building Materials	—	12,500
Chemicals & Drugs	—	150
Chinese Medicines	—	750
Foodstuffs & Provisions	146,307	327,617
Hardware	—	34,192
Oils & Fats	—	5,000
Piece Goods &		
Textiles	—	4,267
Wearing Apparel	—	39,977
Sundries	35,578	209,998
Total	186,8854	629,451

EAST AFRICA

	Imports	Exports
	\$	\$
Chemicals & Drugs	22,320	600
Chinese Medicines	—	—
Foodstuffs & Provisions	—	1,887
Nuts & Seeds	5,400	—
Piece Goods &		
Textiles	—	165,674
Wearing Apparel	—	57,740
Sundries	139,930	85,451
Total	167,650	251,352

**TOTAL VALUES OF IMPORTS & EXPORTS OF MERCHANDISE:
BY COUNTRIES:**

— FOR THE MONTH OF OCTOBER —

COUNTRIES	IMPORTS FROM		EXPORTS TO	
	1946	1947	1946	1947
United Kingdom ...	\$ 7,171,641	\$ 17,499,578	\$ 798,017	\$ 3,126,750
Australia ...	4,002,220	6,033,650	355,641	843,989
Burma ...	—	601,121	81,604	1,069,587
Canada ...	901,763	1,758,259	101,662	104,266
Ceylon ...	10,076	186,885	191,405	629,451
East Africa ...	346,202	187,650	—	251,352
India ...	2,353,856	3,637,725	2,233,408	1,893,975
Malaya (British) ...	8,265,993	12,062,407	15,557,391	10,998,089
New Zealand ...	421	51,055	550	174,284
North Borneo ...	701,987	1,016,912	302,446	601,196
South Africa ...	211,308	668,896	500,388	6,226,758
West Africa ...	—	—	26,302	469,898
West Indies ...	—	—	105,330	46,256
Br. Empire, Other	1,794,275	56,574	319,314	1,775,629
Belgium ...	2,313,121	7,368,744	311,755	1,376,083
China, North ...	8,716,061	8,821,423	14,688,067	7,365,099
" Middle ...	2,654,653	1,962,445	7,780,421	2,674,059
" South ...	21,550,099	23,079,026	16,502,083	7,916,450
Cuba ...	—	6,000	—	144,167
Central America ...	—	18,050	22,825	169,414
Denmark ...	661,538	3,280	100,590	20,050
Egypt ...	9,092	2,865,125	283,283	174,455
France ...	185,152	3,821,355	703,830	1,042,275
French Indo China ...	7,536,366	946,460	4,168,953	1,148,525
Germany ...	—	—	—	—
Holland ...	41,466	851,696	499,743	2,738,601
Italy ...	2,070,044	679,954	49,680	341,722
Japan ...	—	4,137,250	1,434	3,813,911
Kwong Chow Wan ...	868,301	385,083	651,043	34,722
Macao ...	6,999,874	9,017,670	2,827,891	10,730,739
Norway ...	1,094,950	1,813,555	87,154	4,628
Neth. East Indies ...	652,000	1,253,465	790,967	5,956,505
Philippines ...	2,791,185	1,471,243	1,963,324	6,688,387
Portugal ...	119,944	252,182	—	—
Siam ...	3,102,225	8,529,807	5,591,776	10,588,256
South America ...	64,710	242,853	9,605	263,055
Sweden ...	130,162	2,195,867	190,849	129,262
Switzerland ...	586,285	890,600	—	24,024
Spain ...	6,610	23,376	—	—
U. S. A. ...	18,974,261	23,392,397	10,825,463	21,636,392
U. S. S. R. ...	—	676,300	4,855,644	1,550
Others ...	615,365	2,257,839	188,274	1,825,449
TOTAL ...	107,503,186	150,703,667	93,633,112	115,019,260
Total Br. Empire	25,759,729	43,740,712	20,573,458	28,211,480
Total Foreign ...	81,743,464	106,962,955	73,064,654	86,807,780

Nuts & Seeds ...	—	330
Oils & Fats ...	—	37,142
Wearing Apparel ...	—	13,615
Sundries ...	5,142	67,874
Total ...	51,055	174,284

NORTH BORNEO	
<i>Imports</i>	<i>Exports</i>
Building Materials	280,943
Chemicals & Drugs	210
Chinese Medicines	75
Dyeing & Tanning Materials	120
Machinery & En- visions	157,524
Fuels	245,076
Hardware	7,577
Liquors, Intoxicat- ing	15,010
Machinery & En- gines	12,770
Metals	4,200
Nuts & Seeds	54,583
Oils & Fats	164,300
Paints	67
Paper & Paper- ware	14,008
Piece Goods & Textiles	272,472
Wearing Apparel	50,735
Sundries	97,681
Total ...	1,016,912
	601,196

SOUTH AFRICA	
<i>Imports</i>	<i>Exports</i>
Chinese Medicines	4,719
Dyeing & Tanning Materials	55,867
Foodstuffs & Pro- visions	600
Hardware	46,773
Liquors, Intoxicat- ing	10,880
Nuts & Seeds	1,939
Oils & Fats	132,041
Paints	638
Paper & Paper- ware	542
Piece Goods & Textiles	8,397
Wearing Apparel	36,098
Sundries	5,995,479
Total ...	668,896
	6,226,758

WEST AFRICA	
<i>Imports</i>	<i>Exports</i>
Piece Goods & Textiles	18,744
Wearing Apparel	300,811
Sundries	150,343
Total ...	469,898

WEST INDIES	
<i>Imports</i>	<i>Exports</i>
Chinese Medicines	3,374
Foodstuffs & Pro- visions	12,782
Wearing Apparel	26,665
Sundries	3,435
Total ...	46,256

INDIA	visions	676,679	2,373,458
Imports	Fuels	519,140	—
Exports	Liquors, Intoxicat- ing	35,258	186,499
	Machinery & En- visions	8,000	47,716
	Manures	—	15,400
	Metals	180,428	17,490
	Nuts & Seeds	1,637,620	74,096
	Oils & Fats	888,521	75,231
	Paints	391,933	168,652
	Paper & Paperware	161,347	357,174
	Piece Goods & Textiles	403,804	3,526,793
	Tobacco	—	22,945
	Vehicles	255,655	30,950
	Wearing Apparel	—	1,060,646
	Sundries	6,681,593	2,141,732
Total ...	12,062,407	10,998,089	

MALAYA (BRITISH)	Imports	Exports
	\$	\$
Building Materials	46,370	—
Chemicals & Drugs	50,979	97,886
Chinese Medicines	80,273	721,821
Dyeing & Tanning Materials	44,907	4,000
Foodstuffs & Pro-		

NEW ZEALAND	Imports	Exports
	\$	\$
Chinese Medicines	23,000	4,026
Foodstuffs & Pro- visions	22,013	21,503
Metals	—	29,794

**TOTAL VALUES OF IMPORTS & EXPORTS BY MAIN GROUPS:
FOR THE MONTH OF OCTOBER**

Articles	IMPORTS		EXPORTS	
	1946	1947	1946	1947
Animals, Live	\$ 3,497,228	\$ 2,665,850		\$ 106
Building Materials	\$ 2,456,142	\$ 3,884,160	\$ 791,915	\$ 776,040
Chemicals & Drugs	\$ 2,858,564	\$ 6,294,380	\$ 2,300,374	\$ 2,034,996
Chinese Medicines	\$ 5,334,465	\$ 2,080,410	\$ 4,096,536	\$ 2,509,617
Dye & Tanning Materials	\$ 1,729,566	\$ 3,835,927	\$ 2,265,694	\$ 2,038,856
Foodstuffs & Provisions	\$ 17,442,039	\$ 24,464,872	\$ 11,696,012	\$ 11,483,938
Fuels	\$ 1,664,606	\$ 2,838,236	\$ 38,603	\$ 5,033
Hardware	\$ 618,661	\$ 1,183,319	\$ 1,211,557	\$ 1,158,101
Liquors, Intoxicating	\$ 1,552,554	\$ 676,137	\$ 690,036	\$ 213,328
Machinery & Engines	\$ 309,073	\$ 1,641,431	\$ 213,701	\$ 347,641
Manures	\$ 182,561	\$ 389,696	\$ 654,940	\$ 505,745
Metals	\$ 11,048,540	\$ 12,651,439	\$ 8,368,110	\$ 11,509,975
Minerals & Ores	\$ 78,000	\$ 1,378,428	\$ 909,723	\$ 763,216
Nuts & Seeds	\$ 1,574,663	\$ 2,678,921	\$ 946,213	\$ 2,418,036
Oils & Fats	\$ 12,388,385	\$ 17,106,502	\$ 16,299,202	\$ 23,351,388
Paints	\$ 428,453	\$ 1,371,873	\$ 444,911	\$ 586,335
Paper & Paperware	\$ 6,174,840	\$ 7,648,622	\$ 4,616,270	\$ 3,057,698
Piece Goods & Textiles	\$ 11,355,728	\$ 22,431,988	\$ 14,352,753	\$ 19,017,744
Railway Materials		\$ 279,565		\$ 594,000
Tobacco	\$ 3,959,960	\$ 2,784,185	\$ 823,840	\$ 1,066,837
Vehicles	\$ 1,958,888	\$ 2,372,972	\$ 312,355	\$ 391,790
Wearing Apparel	\$ 1,264,357	\$ 2,005,261	\$ 2,350,058	\$ 4,107,288
Sundries	\$ 19,625,643	\$ 28,069,443	\$ 20,255,309	\$ 25,981,607
Total Merchandise	\$ 107,503,186	\$ 150,703,667	\$ 93,638,112	\$ 115,019,260
Treasure	\$ 5,879,320	—	\$ 5,028,120	\$ 1,171,409
Grand Total	\$ 113,382,506	\$ 150,703,677	\$ 98,666,232	\$ 116,190,669

**TOTAL VALUES OF IMPORTS & EXPORTS BY MAIN GROUPS:
FOR THE FIRST TEN MONTHS**

Articles	IMPORTS		EXPORTS	
	1946	1947	1946	1947
Animals, Live	\$ 25,976,190	\$ 23,801,528		\$ 481
Building Materials	\$ 16,854,194	\$ 23,043,632	\$ 3,005,793	\$ 5,563,285
Chemicals & Drugs	\$ 23,283,926	\$ 50,418,637	\$ 19,052,809	\$ 28,769,177
Chinese Medicines	\$ 58,140,269	\$ 21,184,047	\$ 52,915,469	\$ 30,184,910
Dye & Tanning Materials	\$ 9,167,981	\$ 50,953,388	\$ 6,442,728	\$ 20,360,945
Foodstuffs & Provisions	\$ 174,853,672	\$ 190,931,491	\$ 89,883,011	\$ 118,518,929
Fuels	\$ 9,671,557	\$ 26,614,104	\$ 315,694	\$ 496,041
Hardware	\$ 4,030,487	\$ 8,597,873	\$ 6,189,771	\$ 10,248,743
Liquors, Intoxicating	\$ 9,097,072	\$ 9,297,869	\$ 4,944,389	\$ 4,438,506
Machinery & Engines	\$ 5,673,182	\$ 10,363,830	\$ 967,076	\$ 1,706,229
Manures	\$ 1,210,033	\$ 1,990,175	\$ 3,479,706	\$ 7,828,315
Metals	\$ 29,583,836	\$ 8,876,116	\$ 28,894,190	\$ 53,544,284
Minerals & Ores	\$ 1,046,714	\$ 4,764,097	\$ 1,598,362	\$ 6,251,412
Nuts & Seeds	\$ 17,736,039	\$ 20,215,128	\$ 9,568,958	\$ 11,856,006
Oils & Fats	\$ 87,559,199	\$ 167,226,841	\$ 101,279,286	\$ 223,247,118
Paints	\$ 3,180,269	\$ 8,128,386	\$ 3,090,956	\$ 7,250,516
Paper & Paperware	\$ 26,912,680	\$ 54,301,760	\$ 25,026,029	\$ 33,681,533
Piece Goods & Textiles	\$ 73,590,177	\$ 167,224,860	\$ 117,661,168	\$ 151,693,876
Railway Materials	\$ 5,521	\$ 1,630,291	\$ 16,926	\$ 601,516
Tobacco	\$ 19,144,836	\$ 33,544,895	\$ 4,522,843	\$ 10,404,420
Vehicles	\$ 11,237,293	\$ 25,944,389	\$ 1,088,485	\$ 7,151,594
Wearing Apparel	\$ 8,266,936	\$ 11,902,513	\$ 16,289,103	\$ 35,931,503
Sundries	\$ 123,099,261	\$ 207,711,136	\$ 113,850,816	\$ 193,144,155
Total Merchandise	\$ 739,121,324	\$ 1,205,296,966	\$ 610,083,323	\$ 967,873,479
Treasure	\$ 9,745,558	\$ 49,773,890	\$ 15,908,693	\$ 94,670,523
Grand Total	\$ 748,866,882	\$ 1,255,070,856	\$ 625,992,061	\$ 1,062,544,002

BRITISH EMPIRE, OTHER

Imports	Exports	Nuts & Seeds	\$ 53,580	\$ 1,683
		Oils & Fats	\$ 67,857	
Building Materials	\$ 15,000			
Chemicals & Drugs	\$ 208			
Chinese Medicines	\$ 18,669			
Dyeing & Tanning Materials	\$ 18,669			
Foodstuffs & Provisions	\$ 2,994			
Hardware	\$ 20,498			
Liquors, Intoxicating	\$ 6,050			
		Total	\$ 56,574	\$ 1,775,629

BELGIUM

	Imports	Exports
Building Materials	\$ 708,807	\$ —
Chemicals & Drugs	\$ 119,553	\$ 33,600
Dyeing & Tanning Materials	\$ 83,949	\$ —
Foodstuffs & Provisions	\$ 42,007	\$ 19,608
Hardware	\$ 9,842	\$ —
Machinery & Engines	\$ 25,588	\$ —
Manures	\$ 170,042	\$ —
Metals	\$ 4,292,802	\$ —
Nuts & Seeds	\$ 800	\$ —
Oils & Fats	\$ 43,500	\$ 1,176,711
Paints	\$ 307,560	\$ —
Paper & Paperware	\$ 1,081,198	\$ —
Piece Goods & Textiles	\$ 241,418	\$ —
Sundries	\$ 242,478	\$ 145,364
Total	\$ 7,368,744	\$ 1,376,083

CHINA, NORTH

	Imports	Exports
Building Materials	\$ 870	\$ 84,446
Chemicals & Drugs	\$ 30,377	\$ 539,971
Chinese Medicines	\$ 221,880	\$ 252,640
Liquors, Intoxicating Materials	\$ 5,625	\$ 265,903
Foodstuffs & Provisions	\$ 1,075,461	\$ 51,631
Hardware	\$ 73,753	\$ —
Liquors, Intoxicating	\$ 12,335	\$ 19,257
Machinery & Engines	\$ 828	\$ 19,950
Metals	\$ 10,775	\$ 400,130
Nuts & Seeds	\$ 146,465	\$ 4,273
Oils & Fats	\$ 267,567	\$ 3,465,532
Paints	\$ 16,258	\$ 10,357
Paper & Paperware	\$ 6,650	\$ 341,320
Piece Goods & Textiles	\$ 6,324,935	\$ 930,432
Tobacco	\$ —	\$ 420
Vehicles	\$ 7,964	\$ 50,226
Wearing Apparel	\$ 53,006	\$ —
Sundries	\$ 566,879	\$ 928,611
Total	\$ 8,821,428	\$ 7,365,099

CHINA, MIDDLE

	Imports	Exports
Animals, Live	\$ 243,300	\$ —
Building Materials	\$ 13,925	\$ 279,303
Chemicals & Drugs	\$ 14,024	\$ 111,404
Dyeing & Tanning Materials	\$ —	\$ 589,640
Foodstuffs & Provisions	\$ 1,086,392	\$ 125,285
Fuels	\$ 6,390	\$ —
Hardware	\$ 2,450	\$ 2,759
Liquors, Intoxicating	\$ —	\$ 802
Machinery & Engines	\$ —	\$ 2,432
Manures	\$ —	\$ 290,924
Metals	\$ —	\$ 163,826
Nuts & Seeds	\$ 8,770	\$ 15,999
Oils & Fats	\$ 3,479	\$ 446,128
Paints	\$ —	\$ 43,134
Paper & Paperware	\$ 22,293	\$ 117,635

**TOTAL VALUES OF IMPORTS & EXPORTS OF MERCHANDISE:
BY COUNTRIES:
FOR THE FIRST TEN MONTHS**

COUNTRIES	IMPORTS FROM		EXPORTS TO	
	1946	1947	1946	1947
United Kingdom	\$ 30,794,562	\$ 130,603,599	\$ 14,189,868	\$ 31,449,218
Australia	28,637,009	43,632,275	3,299,739	7,537,402
Burma		16,217,241	959,445	6,301,688
Canada	9,256,477	15,883,550	598,206	2,157,047
Ceylon	235,927	1,372,934	998,694	4,654,346
East Africa	457,592	1,187,864	62,780	1,038,713
India	41,957,284	40,051,672	16,996,761	20,986,757
Malaya (British)	59,463,578	80,760,235	142,702,332	176,652,038
Zealand	108,186	267,537	161,529	1,828,680
North Borneo	2,027,853	5,904,121	1,251,622	5,642,820
South Africa	230,936	8,178,864	803,872	17,685,555
West Africa			49,731	1,560,373
West Indies	700	6,868	137,662	343,281
Br. Empire, Other	19,723,193	8,750,950	702,553	7,410,010
Belgium	6,625,443	42,130,314	983,002	10,595,333
China, North	76,977,638	41,312,801	89,734,712	41,271,998
.. Middle	38,804,758	27,480,647	36,385,160	37,792,287
.. South	142,681,528	235,881,609	112,670,672	151,206,552
Cuba		12,480	80,257	982,579
Central America	77,208	349,957	107,530	849,932
Denmark	1,148,070	649,447	2,475,680	930,253
Egypt	313,309	3,153,617	1,497,168	5,408,064
France	1,052,332	13,616,493	2,115,905	17,450,953
French Indo China	53,912,982	16,247,671	29,492,169	14,976,507
Germany			958,625	
Holland	110,537	9,143,134	1,568,309	20,135,282
Italy	2,893,786	9,692,109	261,414	12,343,517
Japan		24,495,988	1,434	7,486,835
Kwong Chow Wan	4,375,517	5,377,854	1,994,964	1,613,783
Macao	63,300,902	59,975,777	26,309,081	53,815,297
Norway	6,504,345	15,463,302	1,470,626	2,379,533
Neth. East Indies	3,195,450	10,357,190	3,116,948	30,459,886
Philippines	12,591,462	13,181,747	9,486,813	44,769,703
Portugal	493,818	873,592	9,848	99,776
Siam	23,855,298	47,673,788	39,901,781	72,408,851
South America	88,674	1,122,972	212,509	1,599,141
Sweden	996,103	7,165,356	2,727,353	5,751,245
Switzerland	2,730,042	12,643,925		230,931
Spain	78,978	172,926		1,214,654
U. S. A.	102,333,931	238,599,913	59,440,714	121,987,969
Others	1,088,116	2,322,547	4,855,644	4,824,004
U. S. S. R.		13,382,100	269,681	19,100,161
TOTAL	739,121,324	1,205,296,966	610,083,368	967,873,479
Total Br. Empire	192,893,097	352,817,710	182,913,994	285,229,928
Total Foreign	546,228,227	852,479,256	427,169,374	682,643,551

Paper & Paperware	—	736
Piece Goods & Textiles	—	5,690
Tobacco	6,000	6,000
Sundries	—	64,633
Total	6,000	144,167

CENTRAL AMERICA

	Imports	Exports
Chinese Medicines	—	3,028
Foodstuffs & Provisions	16,000	35,808
Hardware	—	895
Oils & Fats	—	108
Piece Goods & Textiles	—	10,292
Tobacco	—	335
Wearing Apparel	—	2,545
Sundries	2,050	116,403
Total	18,050	169,414

DENMARK

	Imports	Exports
Building Materials	—	2,000
Foodstuffs & Provisions	3,280	16,600
Sundries	—	1,450
Total	3,280	20,050

EGYPT

	Imports	Exports
Foodstuffs & Provisions	2,865,125	760
Oils & Fats	—	92,235
Piece Goods & Textiles	—	22,500
Wearing Apparel	—	8,183
Sundries	—	50,827
Total	2,865,125	174,455

Piece Goods & Textiles	184,055	261,458
Vehicles	—	31,897
Wearing Apparel	—	600
Sundries	377,367	105,277
Total	1,962,445	2,674,059

Nuts & Seeds	200,726	7,925
Oils & Fats	6,193,888	3,506,794
Paints	360	34,978

FRANCE

	Imports	Exports
Building Materials	601,482	—
Chemicals & Drugs	920,871	75,655
Chinese Medicines	—	6,750
Dyeing & Tanning Materials	1,359,505	92,080
Foodstuffs & Provisions	76,039	2,098
Liquors, Intoxicating	—	78,367
Machinery & Engines	—	11,660
Metals	—	11,332
Nuts & Seeds	—	7,425
Oils & Fats	2,355	273,835
Paper & Paperware	352,468	—
Piece Goods & Textiles	256,391	462,665
Vehicles	—	9,548
Sundries	141,337	121,767
Total	3,821,355	1,042,275

CHINA, SOUTH	Imports	Exports
	\$	\$
Animals, Live	2,117,830	—
Building Materials	249,447	241,503
Chemicals & Drugs	3,497	361,514
Chinese Medicines	291,956	140,622
Dyeing & Tanning Materials	207,963	482,282
Foodstuffs & Provisions	4,942,141	26,536
Fuels	420,454	—
Hardware	24,707	22,223
Liquors, Intoxicating	9,589	1,180
Machinery & Engines	—	157,775
Manures	—	8,740
Metals	3,390,450	830,497
Minerals & Ores	874,625	—

Chinese Medicines	—	400
Foodstuffs & Provisions	—	68,235
Liquors, Intoxicating	—	3,324
Nuts & Seeds	—	1,149

FRENCH INDO CHINA

	Imports	Exports
Building Materials	\$ —	\$ 800
Chemicals & Drugs	—	39,365
Chinese Medicines	116,220	166,080
Foodstuffs & Provisions	474,720	520,942
Hardware	—	770
Liquors, Intoxicating	—	4,665
Nuts & Seeds	18,573	35,404
Oils & Fats	26,930	26,425
Paints	13,892	—
Paper & Paperware	—	33,278
Piece Goods & Textiles	10,000	120,376
Tobacco	—	48,750
Vehicles	—	82,329
Sundries	281,460	74,006
Total	946,460	1,148,525

HOLLAND

	Imports	Exports
Chemicals & Drugs	\$ 18,850	—
Foodstuffs & Provisions	384,044	11,166
Liquors, Intoxicating	—	7,600
Metals	177,836	—
Oils & Fats	21,550	2,569,283
Paper & Paperware	120,600	—
Piece Goods & Textiles	25,968	—
Tobacco	3,990	—
Vehicles	6,800	—
Sundries	84,458	158,152
Total	851,696	2,738,601

ITALY

	Imports	Exports
Chinese Medicines	\$ —	\$ 3,800
vvisions	—	2,000
Metals	204,820	—
Oils & Fats	—	282,500
Piece Goods & Textiles	335,672	—
Vehicles	1,650	—
Wearing Apparel	95,232	—
Sundries	42,580	53,422
Total	679,954	341,722

JAPAN

	Imports	Exports
Foodstuffs & Provisions	—	862
Fuels	723,794	—
Hardware	—	1,246
Liquors, Intoxicating	—	4,847
Oils & Fats	—	2,776,530
Piece Goods & Textiles	3,343,743	408
Vehicles	—	45,365
Wearing Apparel	—	24
Sundries	69,713	984,629
Total	4,137,250	3,813,911

KWONG CHOW WAN

	Imports	Exports
Animals, Live	\$ 102,140	\$ —
Chemicals & Drugs	2,673	—
Foodstuffs & Provisions	—	124,126
Hardware	—	230
Oils & Fats	2,222	34,492
Sundries	153,927	—
Total	385,088	34,722

MACAO

	Imports	Exports
Animals, Live	\$ 202,580	\$ —
Building Materials	17,567	193,222
Chemicals & Drugs	15,155	328,922
Chinese Medicines	291,355	35,303
Dyeing & Tanning Materials	42,746	326,502
Foodstuffs & Provisions	2,259,655	1,556,388
Fuels	206,367	5,038
Hardware	—	3,171
Liquors, Intoxicating	—	25,597
Machinery & Engines	170,107	78,717
Manures	—	104,650
Metals	340,228	129,681
Minerals & Ores	308,812	977,110
Nuts & Seeds	46,210	62,096
Oils & Fats	2,925,272	1,483,620
Paints	—	24
Paper & Paperware	90,260	1,175,998
Piece Goods & Textiles	359,903	921,461
Tobacco	4,016	954,308
Vehicles	—	368,503
Wearing Apparel	6,800	63,918
Sundries	1,727,441	1,887,544
Total Merchandise	9,017,670	10,730,739
Treasure	—	303,800
Grand Total	9,017,670	11,034,539

NORWAY

	Imports	Exports
Foodstuffs & Provisions	—	104
Paper & Paperware	1,813,555	—
Sundries	—	4,524
Total	1,813,555	4,628

NETHERLANDS EAST INDIES

	Imports	Exports
Building Materials	—	\$ 4,225
Chemicals & Drugs	—	5,941
Chinese Medicines	2,180	83,718
Dyeing & Tanning Materials	5,370	18,791
Foodstuffs & Provisions	76,325	195,652
Hardware	—	50,636
Liquors, Intoxicating	—	5,820
Metals	100,076	21,324
Nuts & Seeds	—	2,109
Oils & Fats	645,000	6,296
Paints	—	5,500
Paper & Paperware	—	85,081

Piece Goods & Textiles

	Textiles	Goods	&
Tobacco	—	—	4,216,537
Wearing Apparel	—	—	4,725
Sundries	424,414	616,650	633,500
Total	1,253,365	5,956,505	—

PHILIPPINES

	Imports	Exports
Animals, Live	\$ —	\$ 106
Building Materials	—	49,045
Chemicals & Drugs	12,116	2,180
Chinese Medicines	—	132,232
Foodstuffs & Provisions	51,245	2,811,485
Hardware	—	485,175
Liquors, Intoxicating	—	21,800
Machinery & Engines	—	8,283
Metals	340,065	617,915
Nuts & Seeds	—	128,918
Oils & Fats	339,800	57,204
Paints	1,784	148,919
Paper & Paperware	—	114,865
Piece Goods & Textiles	10,550	480,676
Tobacco	7,240	—
Vehicles	586	—
Wearing Apparel	46,714	449,600
Sundries	652,860	1,188,267
Total	1,471,243	6,688,387

PORTUGAL

	Imports	Exports
Foodstuffs & Provisions	206,574	—
Liquors, Intoxicating	—	450
Oils & Fats	784	450
Sundries	44,374	—
Total	252,182	—

SIAM

	Imports	Exports
Building Materials	783,915	\$ 59,350
Chemicals & Drugs	1,050	160,180
Chinese Medicines	34,335	165,300
Dyeing & Tanning Materials	2,340	190,163
Foodstuffs & Provisions	820,354	833,143
Fuels	46,625	—
Hardware	—	232,935
Liquors, Intoxicating	—	1,652
Machinery & Engines	3,500	31,103
Manures	7,500	800
Metals	7,000	233,305
Minerals & Ores	14,700	—
Nuts & Seeds	501,026	25,715
Oils & Fats	3,944,667	35,212
Paints	—	103,424
Paper & Paperware	—	428,168
Piece Goods & Textiles	—	6,292,734
Railway Materials	276,605	—
Vehicles	—	175,815
Wearing Apparel	—	744,097
Sundries	2,086,190	875,660
Total	8,529,807	10,588,256

SOUTH AMERICA

	<i>Imports</i>	<i>Exports</i>
Chemicals & Drugs	\$ 104,970	—
Chinese Medicines	—	14,731
Dyeing & Tanning Materials	125,619	—
Foodstuffs & Provisions	—	30,977
Liquors, Intoxicating	11,000	—
Oils & Fats	—	3,213
Piece Goods & Textiles	—	1,979
Sundries	1,264	212,155
Total	242,853	263,055

SWEDEN

	<i>Imports</i>	<i>Exports</i>
Building Materials	\$ 66,845	—
Chemical's & Drugs	811,021	—
Foodstuffs & Provisions	—	104
Hardware	2,743	—
Minerals & Ores	—	71,983
Paper & Paperware	1,314,758	—
Sundries	500	57,170
Total	2,195,867	129,262

SWITZERLAND

	<i>Imports</i>	<i>Exports</i>
Chemicals & Drugs	\$ 69,348	—
Dyeing & Tanning Materials	7,273	—
Foodstuffs & Provisions	—	6,460
Hardware	6,615	—
Oils & Fats	73,821	24,024
Piece Goods & Textiles	27,430	—
Sundries	699,653	—
Total	890,600	24,024

SPAIN

	<i>Imports</i>	<i>Exports</i>
Dyeing & Tanning Materials	\$ 17,440	—
Liquors, Intoxicating	2,516	—
Sundries	3,420	—
Total	23,376	—

U. S. A.

	<i>Imports</i>	<i>Exports</i>
Building Materials	\$ 761,397	—
Chemicals & Drugs	2,902,123	2,200
Chinese Medicines	866,585	343,556
Dyeing & Tanning Materials	1,258,269	32,400
Foodstuffs & Provisions	2,667,558	1,393,465
Hardware	394,335	37,391
Liquors, Intoxicating	110,491	5,100
Machinery & Engines	709,149	2010
Manures	15,960	—
Metals	1,896,253	7,851,077
Minerals & Ores	3,200	609,047
Nuts & Seeds	—	2,018,177
Oils & Fats	454,195	5,074,196
Paints	194,305	—

PAPER & PAPERWARE

Piece Goods & Textiles	1,302,146	37,684
Tobacco	1,485,049	185,535
Vehicles	628,980	1,237
Wearing Apparel	799,759	—
Sundries	784,031	92,524
	6,158,612	3,950,793

Total Merchandise

23,392,397	21,636,392
Treasure	517,983

Grand Total

23,392,397 22,154,375

U. S. S. R.

	<i>Imports</i>	<i>Exports</i>
Foodstuffs & Provisions	\$ 5,860	—

Fuels	670,440	—
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Machinery & Engines	—	1,550
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Total	676,300	1,550
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AUSTRIA

	<i>Imports</i>	<i>Exports</i>
Paper & Paperware	\$ 55,750	—

Total	55,750	—
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CZECHOSLOVAKIA

	<i>Imports</i>	<i>Exports</i>
Metals	\$ 43,575	—

Paper & Paperware	56,207	—
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Piece Goods & Textiles	51,230	—
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Sundries	47,561	—
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Total	198,573	—
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FINLAND

	<i>Imports</i>	<i>Exports</i>
Paper & Paperware	\$ 382,085	—

Total	382,085	—
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GREECE

	<i>Imports</i>	<i>Exports</i>
Sundries	\$ —	13,574

Total	—	13,574
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HUNGARY

	<i>Imports</i>	<i>Exports</i>
Vehicles	\$ 5,900	—

Total	5,900	—
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IRAN

	<i>Imports</i>	<i>Exports</i>
Foodstuffs & Provisions	\$ —	65,705

Sundries	—	31,033
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Total	—	96,738
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IRAQ

	<i>Imports</i>	<i>Exports</i>
Chinese Medicines	\$ —	907

Foodstuffs & Provisions	—	47,525
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Total	—	—
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OILS & FATS

Oils & Fats	808,524	—
Piece Goods & Textiles	—	73,410
Wearing Apparel	—	34,722
Sundries	—	40,394
Total	856,049	149,433

OMAN

	<i>Imports</i>	<i>Exports</i>
Metals	—	2,100
Piece Goods & Textiles	—	23,497
Sundries	—	15,255
Total	—	40,852

PORTUGUESE EAST AFRICA

	<i>Imports</i>	<i>Exports</i>
Foodstuffs & Provisions	—	23,646

Hardware	—	12
Paints	—	4,438

Piece Goods & Textiles	—	389,780
Wearing Apparel	—	19,520

Sundries	—	75,407
Total	—	512,803

SYRIA

	<i>Imports</i>	<i>Exports</i>
Nuts & Seeds	—	26,986

Sundries	—	243,440
Total	—	270,426

TURKEY

	<i>Imports</i>	<i>Exports</i>
Chinese Medicines	—	2,369

Sundries	—	269,079
Total	—	271,448

KOREA

	<i>Imports</i>	<i>Exports</i>
Building Materials	—	21,300

Chemicals & Drugs	32,000	55,955
Chinese Medicines	70,000	2,000

Dyeing & Tanning Materials	—	7,335
Foodstuffs & Provisions	247,290	—

Minerals & Ores	174,250	—
Oils & Fats	—	900

Paper & Paperware	—	62,045
Piece Goods & Textiles	120,000	109,934

Sundries	76,442	96,418
Total	719,982	355,887

THE FOREIGN TRADE OF INDOCHINA

(Cambodia, Laos, Cochinchina)
IMPORTS

	Units	1938	1946	— 1947 —				Jan. to Sept.
	Monthly Average	Sept.	June	July	Aug.	Sept.	Sept.	Sept.
Total Tonnage	1,000 T.	26.6	22.7	25.4	15.0	15.4	14.0	139.0
Total Value	1,000,000 \$	10	38.2	90.0	71.3	89.1	75.3	599
Principal Countries:								
France	1,000 T.	5.4	0.9	5.1	6.3	5.3	4.7	44.3
French Empire	"	1.4	—	3.5	0.1	0.5	0.3	8.1
U.S.A.	"	1.4	14.6	1.9	1.9	2.4	2.8	21.6
India	"	0.9	5.1	4.8	0.4	—	—	7.4
Hongkong	"	2.5	0.9	0.6	0.8	0.5	0.3	5.7
N.E.I.	"	5.2	0.8	5.4	4.2	2.6	4.3	31.3
France	1,000 \$	5,374	9,862	48,379	57,293	54,895	39,570	373,265
French Empire	"	438	—	6,028	715	1,593	1,454	16,901
U.S.A.	"	335	12,239	8,475	4,718	21,367	23,829	101,468
India	"	291	9,075	13,439	1,038	33	—	48,891
Hongkong	"	651	5,582	1,424	1,205	2,052	1,231	12,334
N.E.I.	"	478	282	1,578	1,185	864	1,355	5,465

EXPORTS									
Total Tonnage	1,000 T.	1,361	31.1	6.7	9.8	10.5	7.5	133.0	
Total Value	1,000,000 \$	19	88.3	15.1	24.7	19.3	15.8	269	
Principal Countries:									
France	1,000 T.	79.8	14.1	2.9	3.5	2.8	2.1	32.4	
French Empire	"	10.6	0.8	—	0.1	—	—	17.6	
U.S.A.	"	2.0	6.0	0.2	1.2	0.5	—	10.9	
Hongkong	"	14.3	2.3	0.2	1.0	1.0	0.6	11.7	
Singapore	"	6.1	1.9	2.8	1.3	5.0	3.4	30.6	
China	"	2.0	5.9	—	1.5	—	—	6.9	
France	1,000 \$	9,073	58,388	9,814	15,023	8,872	8,333	118,001	
French Empire	"	1,139	549	1	322	71	60	18,940	
U.S.A.	"	2,017	22,538	478	2,400	957	58	35,277	
Hongkong	"	1,502	2,315	941	2,555	2,477	1,520	17,664	
Singapore	"	1,877	2,686	3,085	1,353	4,757	3,404	42,838	
China	"	171	1,498	7	1,873	111	—	4,724	

The recorded imports of Indochina (only Cambodia, Cochinchina and Laos) in Sept. 1947 are comparatively high for this year though slightly reduced compared to August. Total imports valued I.C.\$75.3 million (14,000 tons of merchandise) in September against 89.1 million in August.

These figures do not include the rather large trade of Haiphong where commercial activity, since the Viet-minh had to give up the port and much of the hinterland, has slowly resumed. The Indochina Customs returns only comprise Cambodian, Cochinchina and Laotian trade.

Among the principal imports figured:—387 tons of tobacco valued almost 2 million piastres, 787 tons of wine valued 3.3 million, 4,516 tons of petrol and derivatives, 1,097 tons of cotton piece goods valued 27.6 million, 1,282 tons of machinery for 8 million (against only 348 tons in August).

France remains the principal supplier with 4,700 tons of merchandise for 39.6 million (52.6% of total imports); U.S.A. keep second place with 23.8 million or 31.6%, followed by the countries of the French Union and Empire with 1½ million, the N.E.I. with 1.3 million and Hongkong with 1.2 million.

The recorded exports of Indochina for September totalled 7,500 tons of commercial cargo valued I.C.\$16 million, against in August 10,500 tons for 19 million. Less rice and rubber shipments were responsible for the slight reduction in exports. Exports in September of principal produce were:-rice 2,655 tons, rubber 1,932 tons, salt fish 388 tons, fish oil 236 t., pepper 50 tons (valued 638,000 piastres), colophane 63 tons (valued 243,000 piastres).

Principal buying countries were:—France with 8.3 million or 52½%, Singapore with 3.4 million or 21½%, and Hongkong with 1½ million £C.£ or 9½% of total exports from Indochina.

The balance of trade remains strongly on the deficit side with 59½ million in Sept. However, this deficit figure is lower than in August when it amounted to 69.8 million. For the first nine months of 1947 the unfavourable balance of trade of Indochina amounts to LC.\$330 million.

SHIPPING RETURNS OF SAIGON

	SHIPPING RETURNS OF SAIGON		— 1947 —						
	Units	Monthly Average	Sept.	June	July	Aug.	Sept.	Jan. to Sept.	
Arrivals:									
No. of ships		79	34	32	35	34	34	307	
Tonnage	1,000 T.	324.0	72.3	82.6	81.0	101.8	111.1	918.0	
Departure:									
No. of ships		74	33	39	40	35	35	314	
Tonnage		301.0	61.6	111.0	99.5	101.8	97.6	916.7	
Cargo unloaded		"	43.3	32.5	82.6	36.3	28.2	24.7	
loaded		"	142.4	59.8	25.5	26.8	22.9	25.8	
L" C. tonnage		25 ships	with 77,200 tons	(against 1946 average)	57 ships				

In September the port of Campha registered 25 ships with 77,200 tons (against 1938 average: 57 ships, 167,800 t.)

In September the port of *Haiphong* registered 34 ships with 50,800 tons (against 1938 average: 1,037 ships, 407,500 tons).

INDOCHINA'S INDUSTRIAL PRODUCTION

	Units	1938 Monthly Average	1946 Sept.	June	July	Aug.	— 1947 — Sept.	Jan. to Sept.
Oil (of the Hongay mines in 1947 only)	1,000 T.	194.6	21.1	14.1	15.0	20.6	20.4	149.9
Cement (Tonkin)		22.2	4.5	0.4	0.3	5.0	7.6	29.0
Alcohol (Cochinchina)	1,000 Lb.	1,830	449.9	313.7	344.5	473.2	413.9	2,649.7
(Cambodia)		350	429.3	519.0	502.1	503.3	—	—
Beer (Cochinchina)	1,000 Hl.	—	5.5	9.6	10.8	10.9	11.4	88.2
Sugar	Tons	981	726	838	1,158	1,348	1,236	8,888
Salt	"	3,072	1,232	3,560	1,338	288	188	10,188
Tobacco	"	278	111	201	226	231	240	1,610
Oxygen	"	1,000 m ³	—	7.7	12.9	12.7	16.1	113.3
Acetylene	"	"	3.5	7.6	7.9	7.9	8.7	63.3

Coal production: in August 20,380 tons. Arrivals of coal in Cochinchina for September: 1,300 tons (on account of transport difficulties).

COST OF LIVING INDEX OF SAIGON

	1946	— 1947 —					
Européans:	Basis: First Six Months, 1939:—100:	Sept.	May	June	July	Aug.	Sept.
food	1,387	2,041	1,967	1,952	1,901	2,011	1,978
housing	454	537	593	650	676	676	572
services	792	919	919	1,014	1,014	1,014	929
clothing	—	2,434	2,193	2,193	2,171	2,127	2,220
divers	978	1,105	1,115	1,125	1,125	1,125	1,072
General Index	1,187	1,544	1,524	1,567	1,587	1,595	1,517
General Index of Middle-class Indochinese	1,433	2,005	1,991	2,092	2,125	2,209	2,004
General Index of Working class Indochinese	1,705	2,402	2,378	2,522	2,552	2,706	2,415
Basis: March 1946:—100:							
Europeans	112	146	144	148	150	151	148
Middle-class Indochinese	123	172	171	177	180	187	171
Working-class Indochinese	132	186	184	195	197	209	187

HONG KONG IMPORTS & EXPORTS DEPARTMENT

THE FREE PORT

Hongkong is a free port. Many people choose to interpret this to mean that there ought not to be any trading restrictions or any duties imposed on any imported commodities.

The term "Free Port" does not mean this. It means that in Hongkong there is no general tariff and that there is no distinction between the duties levied on commodities which are imported and those on similar commodities which are manufactured in the Colony.

There are five commodities which are subject to duty. This duty is paid on importation, ex bond, in respect of commodities manufactured abroad and ex factory bonds where the goods are manufactured in the Colony. Except where imperial preference rates prevail, the rates are the same both for locally manufactured products and those imported.

The five commodities which are subject to customs and excise duty are as follows:—

Liquors.

Tobacco.

Toilet Preparations and Proprietary Medicines.

Hydrocarbon Oils.

Aerated Waters

Commodities which include any of the above substances in their manufacture pay duty according to the percentage content of the dutiable commodity. For example, scent includes alcohol and therefore pays duty as a toilet preparation and also on its alcoholic content. Many paints, polishes and insecticides contain hydrocarbon oil and duty is levied on the percentage content of such oil.

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IMPORT & EXPORT DECLARATIONS

By virtue of the REGISTRATION OF IMPORTS AND EXPORTS ORDINANCE all importers and exporters are required to file with the Imports and Exports Department an import or export declaration in respect of any commodity imported into or exported from the Colony.

The Import Declaration must be submitted on Form 1—I within 72 hours of the importation of a commodity and the export declaration on Form 2—E within 48 hours of export.

It should be noted that an export declaration is NOT required in respect of any goods for which a special export licence has been granted.

ed since the export licence serves as an export declaration.

It is from these declarations that the import and export figures are compiled each month. Such statistics are of vital importance to bankers, merchants and the representatives of foreign governments in this Colony, and are sent all over the world. Governments and Economists both in London and Washington are interested in the trade of our Port.

Some difficulty, however, is experienced in the Imports and Exports Department in obtaining the necessary figures owing to the delay on the part of some merchants in forwarding returns.

The main source of trouble seems to be that under pressure of business, merchants overlook the necessity of sending in their declarations. The procedure is as follows:—

The declaration is made out and deposited in the Manifest Office on the ground floor of the Fire Brigade Building, North side.

This job can be delegated to a junior clerk in your office, and will save the time of senior staff attending to exasperating reminders from the Imports and Exports Department, and improve the clerical administration in this Department. A simple directive today is all that is necessary.